


EPA WORK ASSIGNMENT NUMBER: 041-2Z00
EPA CONTRACT NUMBER: 68-W8-0110
EBASCO SERVICES INCORPORATED

ARCS II PROGRAM

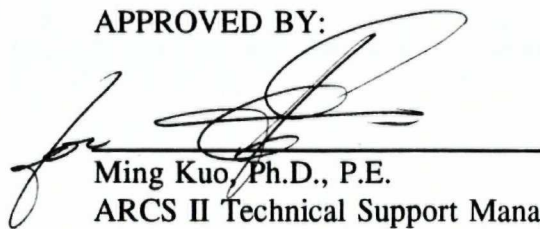
FINAL
PRELIMINARY ASSESSMENT (PA)
ERDLE PERFORATING COMPANY SITE
MONROE COUNTY, NEW YORK
CERCLIS NO.: NYD982531865

JUNE 1993

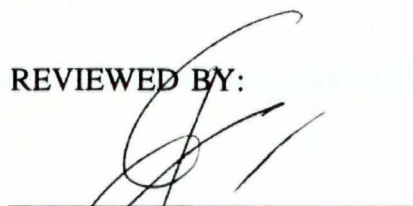
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1.0 INTRODUCTION

Under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA), Ebasco, on behalf of the U.S. Environmental Protection Agency (USEPA), Region 2 conducted a Preliminary Assessment (PA) at the Erdle Perforating Company, 100 Pixley Industrial Parkway in the Town of Gates, Monroe County, New York, CERCLIS No.: NYD982531865. The purpose of this investigation was to collect information concerning conditions at the Erdle Perforating site sufficient to assess the threat posed to human health and the environment and to determine the need for additional CERCLA/SARA or appropriate action. The scope of the investigation included review of available file information, a comprehensive target survey, and an off-site reconnaissance conducted on January 27, 1993.

2.0 SITE DESCRIPTION, OPERATIONAL HISTORY, AND WASTE CHARACTERISTICS

2.1 Location

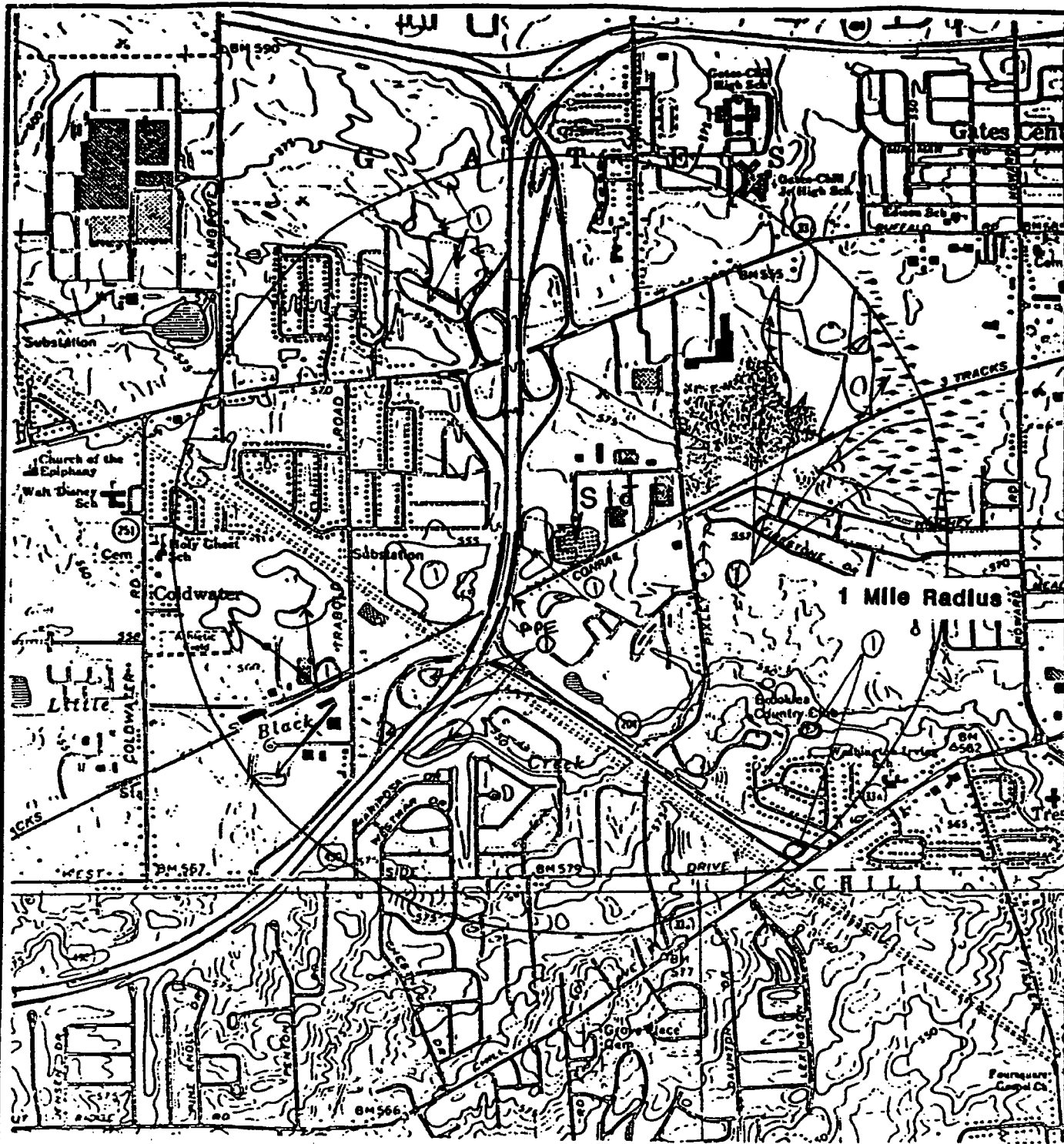
Erdle Perforating Company is located at 100 Pixley Industrial Parkway in the Town of Gates, Monroe County, New York (Figure 1). The site has a latitude of 43°08'20" and a longitude of 77°42'50" (Reference 1, p. 1 of 1; Reference 2, p. 1 of 1). To reach the site coming from downtown Rochester, take Interstate 490, (also known as Western Expressway) to Exit 7, Route 33, East. After traveling for less than a mile, turn north onto Pixley Road, Pixley Industrial Parkway. The site is located at the dead end of Pixley Industrial Parkway.

The climate of Monroe County is humid-continental. Winters are long and severe and summers are warm. In summer, the average daily maximum temperature varies from high 80s to low mid to upper 90s (°F), and in winter the average daily minimum is in the teens. (Reference 3, p. 2 of 7.)

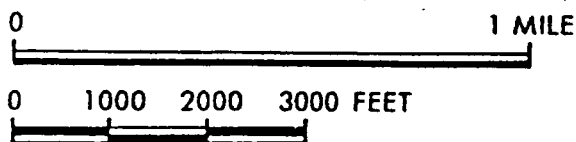
2.2 Site Description

Erdle Perforating Company is located in a small industrial park in the Town of Gates, Monroe County, New York. There is one warehouse type building which is used for office, production and storage. There is a paved parking area in front of the building and grass on the remaining three sides. The site is bounded on the south by a railroad track, on the west by Interstate 490, and on the north and east by other industries. On the western property line a small drainage ditch flows south toward an unnamed stream, which flows under the railroad track and finally discharges into Little Black Creek. A wetland area is located just south of the site (Reference 4, p. 1 of 1).

Three underground storage tanks were removed from the site; one was suspected of leaking. The tank removal area was filled with clean soil and crusher run. During site reconnaissance there was no indication of stressed vegetation in the area of the tank removal. The tank removal area was not completely grass covered; some soil was visible through the grass. (Reference 4, p. 1 of 1.)



Source: USGS Map, Rochester West and West Henrietta Quadrangles, N.Y. 1978



LEGEND:

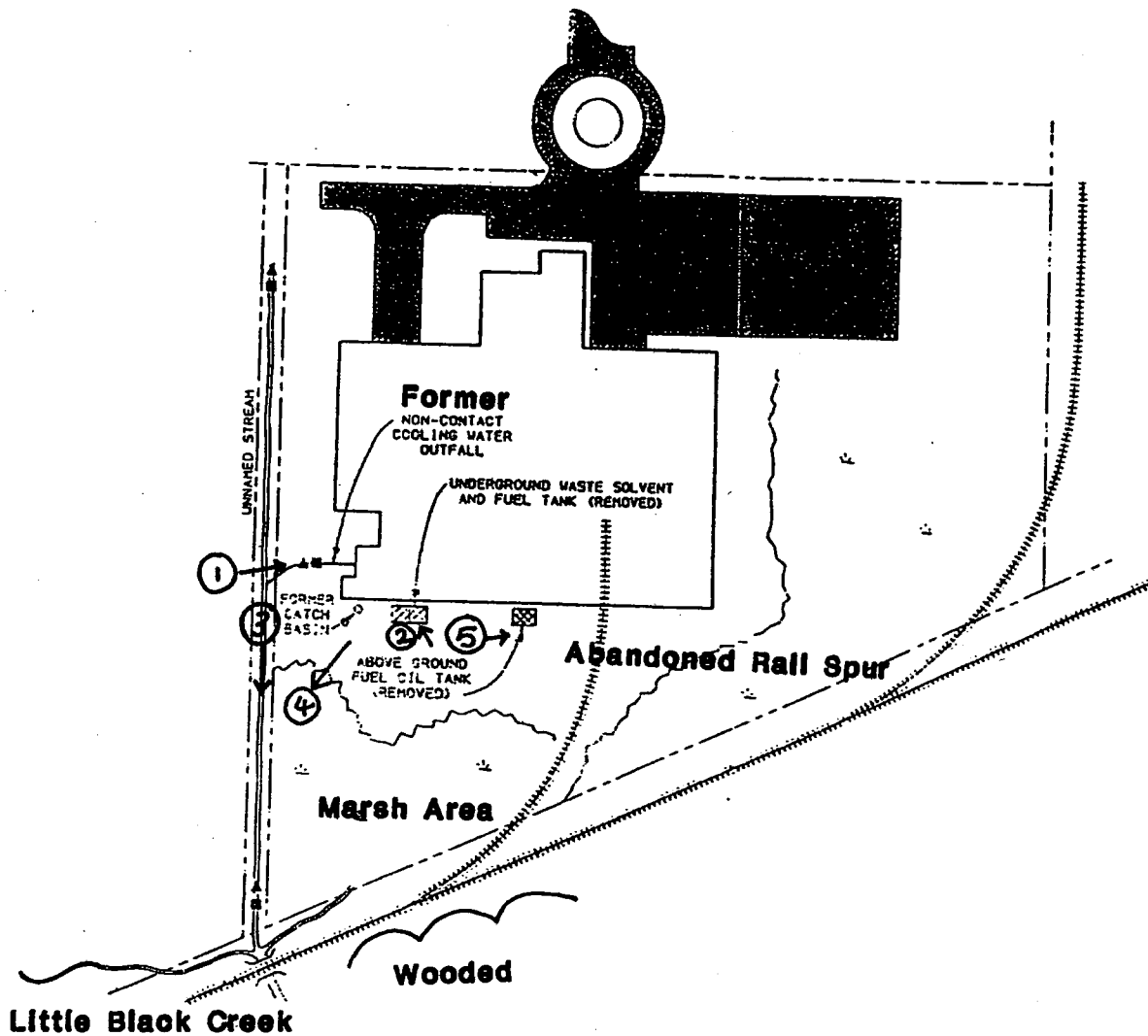
- ① Sensitive Environments (WETLANDS)
- ② NEAREST RESIDENCE



**SITE LOCATION MAP
ERDLE PERFORATING SITE
ROCHESTER, NEW YORK**

EBASCO ENVIRONMENTAL

FIGURE 1



⊙ → Photograph number & orientation

NOT TO SCALE

SITE SKETCH
ERDLE PERFORATING
GATES, NEW YORK

EBASCO ENVIRONMENTAL

FIGURE 2

2.3 Operational History and Waste Characteristics

Erdle Perforating manufactures various kinds of perforated metal sheets. For perforating purposes lubricating agents are used. To enhance final product quality, trichloroethene (TCE) was formerly used as a degreasing agent in a vapor degreaser. Cooling water discharges from the vapor degreaser were formerly released to a drainage ditch on the west side of the building. The vapor degreaser is no longer in use. Used TCE was stored in a 2,000 gallon underground storage tank located outside the southwestern corner of the building. Adjacent to the TCE tank, there were two additional tanks, a waste cutting oil tank and a fresh oil tank (Reference 5, p. 1 of 21). In January 1987, American Environmental Services, Inc. emptied the TCE storage tank. Upon testing the waste, it was found to contain water. An integrity test conducted on the tank using air pressure, indicated that the tank was not tight, and that a release had most likely occurred (Reference 5, p. 2 of 2).

From January 6 to 9, 1987, Day Engineering conducted a soil and groundwater sampling program. Results indicated the presence of chloromethane, 1,1-dichloroethane, 1,1,1-trichloroethane (TCA), tetrachloroethane, 1,2-dichloroethene and trichloroethene in soil and groundwater samples obtained from hand auger borings near the TCE tank. The levels of contaminants in soil ranged from 14 ppb to 2,000 ppb. No contaminants were detected above the detection limits in a background soil sample. The levels of contaminants in the groundwater ranged from 62 ppb to 64,600 ppb. No contaminants were detected above the detection limits in the background groundwater sample (Reference 5, pp. 7, 8 of 21, 10, 11 of 21 and 18 of 21). The results of the sampling prompted the removal of the three tanks (Reference 5, p. 9 of 21).

In April 1987, American Environmental Services, Inc. removed the 2,000-gallon underground waste TCE tank, the 3,000-gallon underground waste oil tank, and the fresh oil tank. More than 120 cubic yards of soil and debris and 3,000 gallons of hazardous waste liquids were shipped off-site by hazardous waste manifest, with generator ID number NYD002206944 to Frontier Chemical Waste Process, Inc. and SCA Chemicals (Reference 6, pp. 15 to 21 of 21). Surface water and sediment samples were collected as part of the removal action and analyzed for volatile organic contaminants. Background samples of sediment and surface water indicated that no contaminants were present above the detection limit. Samples of the sediment and surface water immediately below the former cooling water discharge location contained TCE levels of 1,740 ppb and 750 ppb, respectively. Other contaminants detected included chloroform, 1,2-dichloroethene, and bromodichloromethane at levels ranging from 120 ppb to 1,390 ppb in sediment, and 1.3 ppb to 32 ppb in surface water (Reference 6, pp. 1 to 14 of 21). Chlorinated solvents were found at levels ranging from 6.3 ppb to 354,000 ppb in soil samples taken from the walls of the waste tank excavation (Reference 6, pp. 3 to 10 of 21).

In January 1988, Erdle Perforating was notified by New York State Department of Environmental Conservation (NYSDEC) that it had been placed on the Registry of Inactive Hazardous Waste Disposal Sites, as a Class 2 site which is defined as, "significant threat to human health or environment - action, required (Reference 7, p. 1-8 of 8)."

NYSDEC negotiated an Order on Consent with Erdle Perforating, in January 1990, to provide all information and reports to NYSDEC which had been obtained or completed to date, and to

begin the process of conducting a Remedial Investigation and Feasibility Study (RI/FS) (Reference 8, p. 1-22 of 22).

An RI/FS work plan was prepared and executed by O'Brien & Gere. The results of the RI/FS submitted by O'Brien & Gere to Erdle Perforating were rejected by Erdle Perforating. As a result Erdle Perforating hired Radian Corporation to develop a work plan for the RI/FS and to assist in the petition to reclassify the site on the NYSDEC Registry of Inactive Hazardous Waste Sites (Reference 9, p. 1 of 1).

3.0 GROUNDWATER PATHWAY

3.1 Hydrogeologic Setting

Geologic features in Monroe County date back to the Ice Age, which began a million years ago. The bedrock formation starting from the oldest to the youngest is as follows: Queenstone Shale, Medina Sandstone, Lockport Dolomite, Black Pittsford Shale, Red Vernon and Green Camillus Shale, Gray Ertie Waterlime and the Onondaga Limestone. Lockport Dolomite and Onondaga Limestone escarpments are good sources of water, but the water is hard. Casad loamy fine sand is most prominent in the area. In some areas this soil is underlain by compact impermeable glacial till. It is suited for commonly cultivated crops, and pasture and woodland (Reference 3, p. 6 of 6, 3 of 6).

A report by FACT Technical Service, Inc., on soil investigations at the Erdle Perforating site indicates that bedrock is approximately 10 to 12 feet deep, with groundwater depths of approximately 5 feet to 8 feet (Reference 10, p. 1-6 of 6). Shallow groundwater at the site was present between 7 inches and 11 inches below the ground surface during sampling in 1987 (Reference 5, p. 21 of 21). Although no site-specific information exists regarding groundwater flow direction, shallow groundwater underneath the site appears to discharge to the unnamed stream and to the wetland area immediately adjacent to the southwestern boundary of the site.

3.2 Groundwater Targets

Groundwater is not a primary source of water in the Rochester area of Monroe County. Within a 4-mile radius of the site, most residents are served by the Monroe County Water Authority, which obtains its water from an intake located in Lake Ontario (Reference 15, p. 1-2 of 2). Only 668 people rely on private wells for their water supply (Reference 14, p. 1-2 of 2; Reference 15, p. 1-2 of 2).

The nearest well is apparently located within the 0 to 0.25 mile radius, serving one person. Within the 0.25 to 0.5 mile radius, there is 1 well serving two people. In the 0.5 to 1 mile radius, 16 people use six wells. The exact locations or depths of these wells are not known.

3.3 Groundwater Conclusions

Groundwater contamination by chlorinated solvents has been documented in the area of the former waste TCE tank. Groundwater flow direction appears to be towards the unnamed stream

and the wetland area south of the site. Groundwater supply wells are not expected to be adversely impacted by site related groundwater contamination.

4.0 SURFACE WATER PATHWAY

4.1 Hydrologic Setting

The site is located on relatively flat topography with site elevations ranging from 550 feet to 555 feet NGVD (Reference 16). The nearest surface water is located on site (Figure 2).

A drainage ditch located on the western perimeter of the Erdle Perforating site formerly received discharges of cooling water from the vapor degreaser. The ditch flows into an unnamed stream. The unnamed stream flows approximately 0.5 mile, passes under the railroad track, and joins Little Black Creek. Little Black Creek flows approximately 3.5 miles before it discharges into the Genesee River (Figure 2, Reference 16). The Genesee River flows from south to north and has an average discharge of 76.92 cubic meters per second (Reference 12, page 1 of 2).

4.2 Surface Water Targets

There are no drinking water intakes located within the 15-mile downstream pathway of the site (Reference 18). Most residents are served by drinking water supplied by the Monroe County Water Authority, which draws water from Lake Ontario outside of the 15-mile pathway (Reference 15, p. 1-2 of 2). The nearest wetland is located along the southwestern boundary of the site, in the path of the unnamed stream. Wetlands are located along the entire 15-mile surface water pathway (Reference 16). There are no endangered species listed for Monroe County. One unprotected plant, *Buchnera americana*, is located within one mile of the site and was last observed in 1897 (Reference 13, p. 1-3 of 3).

4.3 Surface Water Conclusions

Chlorinated solvents were detected above background in surface water samples from the drainage ditch on the Erdle Perforating site. Also, contaminated groundwater discharges to the unnamed stream and wetland area is suspected. Due to documented contamination in the drainage ditch and shallow groundwater, the unnamed stream, the wetland area south of the site and the Little Black Creek may be impacted by site related contamination.

5.0 SOIL EXPOSURE AND AIR PATHWAYS

5.1 Physical Conditions

At the time of site reconnaissance there were no signs of stressed vegetation. The tank removal area has been backfilled with clean soil and crusher run and was partially grass covered (Reference 4, p. 1 of 1). Contamination documented at the site is confined primarily to subsurface, i.e., in the walls of the tank removal area and groundwater (Reference 6, pp. 3-10 and 13, 14 of 21).

5.2 Soil and Air Targets

The site is in operation eight hours per day and there are 72 workers on the site (Reference 17, p. 1 of 1). There is no residence, school or daycare facility located on or within 200 ft. of the site. The nearest residence is approximately 2,000 feet west of the site (Reference 16). There are approximately 70 residences within 0.25 mile of the site. The total population within a 4-mile radius is 86,898 (Reference 14, p. 1-2 of 2). The nearest wetland is located near the southwestern property boundary and occupies approximately 6.5 acres (Reference 16).

5.3 Soil Exposure and Air Pathway Conclusions

Since the documented contamination is primarily confined to subsurface soil and groundwater, there is no suspected air release. The tank removal area is not currently used or accessed by the on-site worker population. The potential for exposure through the soil or air pathways is considered to be low.

6.0 SUMMARY AND CONCLUSIONS

The Erdle Perforating Company manufactures perforated metal sheets. TCE was formerly used as a degreasing agent to enhance the final product quality. Used TCE was stored in an underground storage tank which has been removed due to suspected leakage. Groundwater and soil contamination has been documented in the tank removal area. Vapor degreasing cooling water which may have contained TCE was released to a drainage ditch on the west side of the site. Surface water and sediment contamination has been documented in the ditch. Based on the documented presence of TCE in surface water, groundwater, sediment and soil and its possible effect on receptors, additional sampling of surface water and sediments in the unnamed stream and in Little Black Creek is recommended to determine if site related contamination is impacting these areas.

Reference List

REFERENCES

1. United States Environmental Protection Agency, "Standard Operating Procedure to Determine Site Latitude and Longitude Coordinates", 1993. Calculation worksheet for Erdle Perforating Company.
2. Latitude and Longitude Document Record Form-taken from USGS Quadrangle, Rochester West.
3. United States Department of Agriculture, "Soil Survey of Monroe County, New York", 1973.
4. On-site Reconnaissance, Photodocumentation Log and Photographs, January 27, 1993.
5. Soil and Ground Water Sampling Report", Day Engineering, February 1987.
6. "Underground Tank and Soil Excavation", Day Engineering, July 1987.
7. Notice to site owners of inclusion of Site by NUSDEC in its list of Inactive Hazardous Waste Disposal Sites. January 1988.
8. "Order on Consent," Division of Environmental Enforcement, December 1992.
9. Letter to Valerie Morra, Sheladia Associates, from Michael Rick, Erdle Perforating, regarding current status of site, May 7, 1993.
10. "Boring Logs," Fact Technical Services, October 1969.
11. Letter to Valerie Morra, Sheladia Associates, from Michael Rick regarding site information, December 1992.
12. United States Geological Survey, "Water Resources Data, New York, Part 1", 1974.
13. Natural Heritage Program Database Report.
14. Frost Associates "Population Data", May 1993.
15. New York State Department of Health, Water Supply Maps, Monroe County, 1982.
16. Four Mile Radius Map, USGS Quadrangles Rochester West, West Henrietta, Spenceport, 1981.
17. Record of Phone Conversation between Vineet Bhanot & Michael Rick, January 29, 1983.
18. Figure 3 - 85 Mile Surface Water Pathway Sketch - Erdle Perforating.

PHOTODOCUMENTATION LOG

Photodocumentation Log

1. View facing east of former discharge point from vapor degreaser; January 27, 1993; 8:30 a.m.
2. View facing north of underground storage tank removal area; January 27, 1993; 8:35 a.m.
3. View facing south of unnamed stream that received former discharges; January 27, 1993; 8:40 a.m.
4. View facing southwest showing marshy area and one monitoring well; January 27, 1993; 8:42 a.m.
5. View facing east along the back of the building; January 27, 1993; 8:45 a.m.



1



2



3

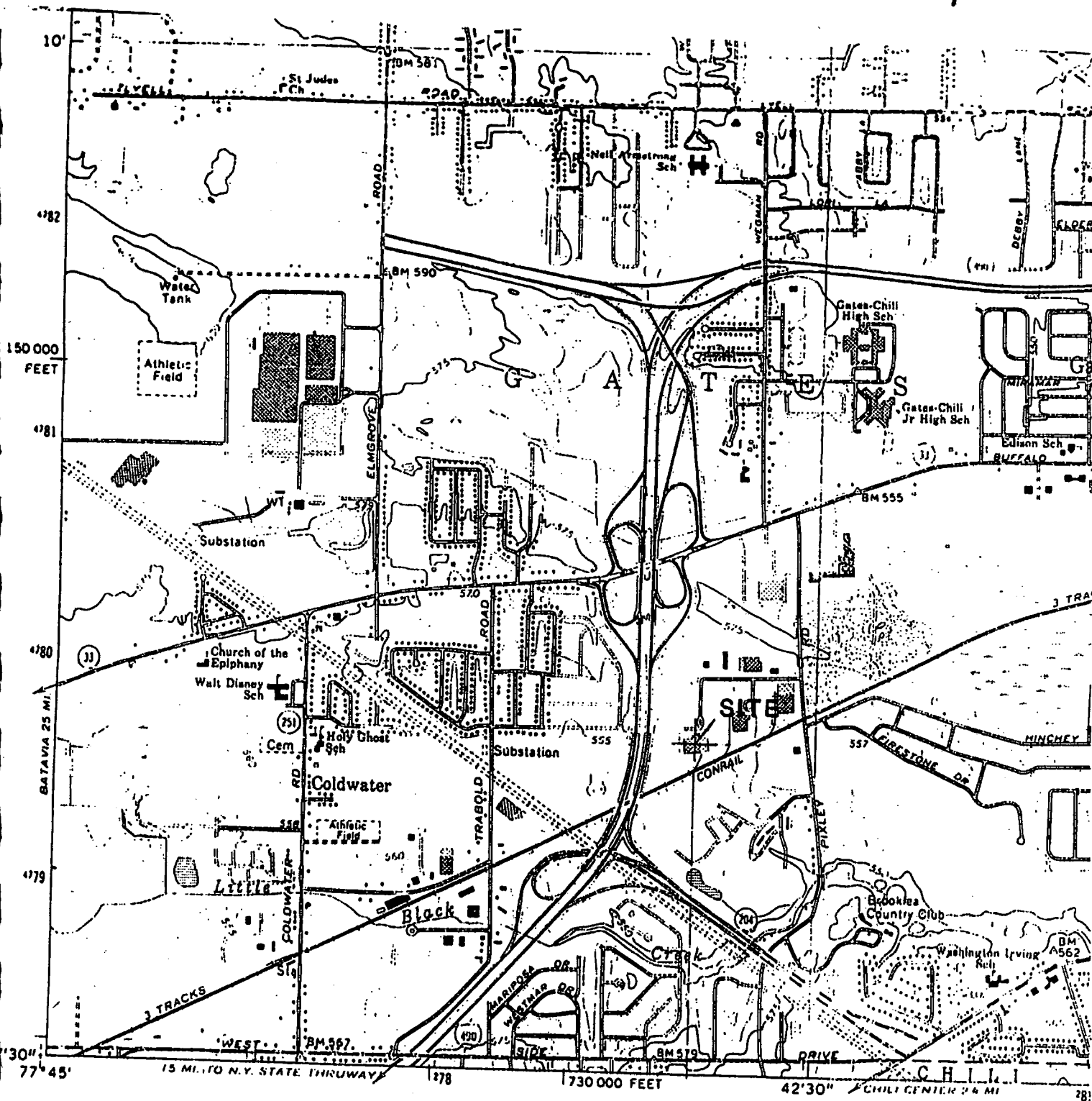


4



Reference 1

191



Mapped, edited, and published by the Geological Survey
Control by USGS, USC & GS, and New York Geodetic Survey

Site Name: *Erie Perforating*
Map Name: *Rochester west*

Scale: 1:24000

Number:

Date: 1927

Coordinates of lower right hand corner of 2.5 minute grid

Latitude *43° 7' 30"*

Longitude *77° 42' 30"*

Reference 2

LATITUDE AND LONGITUDE CALCULATION WORKSHEET #2
LI USING ENGINEER'S SCALE (1/60)

SITE NAME: Erdle Perforating CERCLIS #: NYD982531865
 AKA: _____ SSID: _____
 ADDRESS: 100 Pixley Industrial Parkway
 CITY: Rochester STATE: NY ZIP CODE: 14624
 SITE REFERENCE POINT: Centre point of building
 USGS QUAD MAP NAME: Rochester West TOWNSHIP: _____ N/S RANGE: _____ E/W
 SCALE: 1:24,000 MAP DATE: 1978 SECTION: _____ 1/4 _____ 1/4 _____ 1/4
 MAP DATUM: (1927) 1983 (CIRCLE ONE) MERIDIAN: _____
 COORDINATES FROM LOWER RIGHT (SOUTHEAST) CORNER OF 7.5' MAP (attach photocopy):
 LONGITUDE: 77° 37' 30" LATITUDE: 43° 07' 30"
 COORDINATES FROM LOWER RIGHT (SOUTHEAST) CORNER OF 2.5' GRID CELL:
 LONGITUDE: 77° 42' 30" LATITUDE: 43° 10' 00"

CALCULATIONS: LATITUDE (7.5' QUADRANGLE MAP)

- A) NUMBER OF RULER GRADUATIONS FROM LATITUDE GRID LINE TO SITE REF POINT: 145
 B) MULTIPLY (A) BY 0.3304 TO CONVERT TO SECONDS:
 $A \times 0.3304 = \underline{47.90}''$
 C) EXPRESS IN MINUTES AND SECONDS ($1' = 60''$): 0° 47' 90"
 D) ADD TO STARTING LATITUDE: 43° 07' 30".00 + 0° 47' 90" = 43° 07' 77.9"
 SITE LATITUDE: 43° 8' 17.9" = 43° 8' 17.9"

CALCULATIONS: LONGITUDE (7.5' QUADRANGLE MAP)

- A) NUMBER OF RULER GRADUATIONS FROM RIGHT LONGITUDE LINE TO SITE REF POINT: 72
 B) MULTIPLY (A) BY 0.3304 TO CONVERT TO SECONDS:
 $A \times 0.3304 = \underline{23.78}''$
 C) EXPRESS IN MINUTES AND SECONDS ($1' = 60''$): 0° 23' 78"
 D) ADD TO STARTING LONGITUDE: 77° 42' 30".00 + 0° 23' 78" =
 SITE LONGITUDE: 77° 42' 53.78"

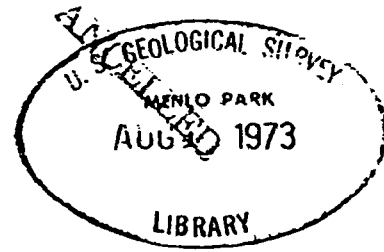
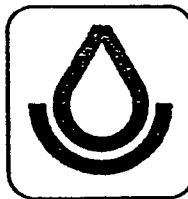
INVESTIGATOR: Vineet Bharot DATE: 01/06/93

Reference 3

A3H4

SOIL SURVEY

Monroe County New York



UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
In cooperation with
CORNELL UNIVERSITY AGRICULTURAL EXPERIMENT STATION
Issued March 1973

Farming

According to the 1964 Census of Agriculture, 46 percent of the acreage of Monroe County was in farms. Of the 1,466 farms in the county, only 970 were classified as commercial. The acreage included 131,781 acres of cropland, 8,704 acres of pasture, 14,929 acres of woodland, and about 14,000 acres used for buildings, lanes, and other purposes. The statistics do not include cropland that was neither harvested nor pastured.

Between 1959 and 1964, the number of farms, especially small farms, declined rapidly, but the average size increased. For example, the number of farms more than 500 acres in size increased from 33 to 38. The number of cash-grain farms is increasing. The number of dairy farms and vegetable and fruit farms is decreasing, but the trend is to larger farms.

Water Supply

The domestic water supply in the dominantly rural areas of Monroe County comes from deep wells in both rock and unconsolidated deposits. Wells are also the main source of water for the towns and villages, except those that are near Lake Ontario or that make up the suburbs of Rochester. In areas south of the Lockport limestone escarpment, the water supply is adequate in most places, but to the north of this escarpment it is erratic and not dependable. In areas that are underlain by Queenston Shale bedrock, neither the quality nor quantity of water are reliable. In many places several wells must be dug before a reliable water supply can be found, and most of the wells drilled into this shale are not adequate during prolonged dry periods. In many places, the water contains sulfur

and a large amount of salts. There are several artesian wells closely associated with the Lockport limestone escarpment. Both the Lockport and the Onondaga escarpments are good sources of water, but the water is hard.

The water supply for the city of Rochester comes from Hemlock Lake and other upland reservoirs, as well as directly from Lake Ontario. Much of the water for the suburbs of Rochester also comes from Lake Ontario. These suburbs are served by the rapidly expanding Monroe County Water Authority, which uses Lake Ontario as its main source of water. Many of the small villages also pump water from the lake.

Climate

The climate of Monroe County is humid-continental. Atmospheric flow and weather systems come predominantly from continental sources. Warm, occasionally humid, weather results when the airflow is from the south or southwest; cold, dry weather results when the flow is from the northwest or north. From time to time, well-developed weather systems off the mid- or north-Atlantic coast bring airflow from maritime sources into the county. Cool, cloudy, and often damp weather conditions prevail in this flow coming from the easterly quadrant.

Summers are pleasantly warm. Winters are quite long and cold and have frequent periods of stormy, unsettled weather. Precipitation on the average is evenly distributed in winter. Table 12 gives data on temperature and precipitation. Table 13 gives the probabilities of freezing temperatures in spring and fall.

* By A. Boyd Pack, State climatologist, National Weather Service, Ithaca.

TABLE 12.—Temperature and precipitation data

[Data from Rochester]

Month	Temperature				Precipitation				
	Average daily maximum	Average daily minimum	7 years in 10 will have—		Average total	3 years in 10 will have—		Snowfall	
			Maximum temperature equal to or higher than—	Minimum temperature equal to or lower than—		More than—	Less than—	Average total	7 years in 10 will have more than—
	°F.	°F.	°F.	°F.	Inches	Inches	Inches	Inches	Inch
January.....	33	18	46	3	2.3	2.8	1.6	20	13
February.....	33	17	50	3	2.6	2.8	2.0	21	14
March.....	40	24	62	11	2.7	2.9	2.1	15	8
April.....	55	36	74	26	2.8	3.2	2.2	3	1
May.....	67	46	84	34	2.7	3.2	2.2	(¹)	(²)
June.....	78	56	90	45	2.5	3.3	1.8	0	0
July.....	83	61	92	51	2.8	2.8	1.9	0	0
August.....	80	59	90	47	2.8	3.4	2.1	0	0
September.....	73	52	88	39	2.4	2.7	1.9	0	0
October.....	62	42	79	31	2.5	3.3	1.4	(¹)	(²)
November.....	48	33	69	22	2.6	3.0	2.0	7	4
December.....	36	22	51	5	2.2	2.2	1.8	14	8
Year.....	57	39	94	-2	30.9	32.9	27.0	80	66

¹ Less than half an inch.

² 1 year in 10 will have more than 1 inch.

TABLE 13.—Probabilities of last freezing temperature in spring and first in fall at Rochester

Probability	Dates for given probability and temperature					
	16° F.	20° F.	24° F.	28° F.	32° F.	36° F.
Spring:						
1 year in 10 later than	April 1	April 5	April 16	April 25	May 19	May 31
1 year in 4 later than	March 23	March 30	April 9	April 21	May 10	May 22
1 year in 2 later than	March 13	March 23	April 2	April 16	May 1	May 13
3 years in 4 later than	March 8	March 17	March 26	April 11	April 22	May 4
9 years in 10 later than	February 27	March 11	March 19	April 6	April 13	April 26
Fall:						
1 year in 10 earlier than	November 18	November 12	November 2	October 12	September 27	September 15
1 year in 4 earlier than	November 24	November 18	November 9	October 21	October 4	September 23
1 year in 2 earlier than	December 2	November 25	November 17	October 30	October 13	October 1
3 years in 4 earlier than	December 10	December 3	November 25	November 9	October 21	October 10
9 years in 10 earlier than	December 16	December 9	December 2	November 17	October 28	October 18

The county is in or near the path of most major weather systems that move across the continent or up the Atlantic Coast. This tends to produce a variety of weather conditions. Temperature and other atmospheric conditions usually undergo considerable change within a time span of a few days. In any given week, the weather can be quite different on the average from that in the preceding or following week. Seasonal weather is commonly variable from year to year.

Lake Erie and Lake Ontario have an important influence on the climate of the county. Of prime importance is the moderating effect on temperature. Extremely high temperatures in summer are less frequent than in areas well removed from the Great Lakes. Similarly, in areas near the Great Lakes, especially Lake Ontario, the soils are slow to warm up in spring. This delays plant growth and allows tender crops to pass more safely through critical periods of freezing temperatures. Cooling at night is reduced, which extends the growing season, especially in autumn. Lake Ontario remains largely unfrozen during the winter; thus, it modifies the severe, below-zero temperatures that affect more inland localities of the State at similar latitudes and elevations.

Elevation has a minor influence on the climate because of the relatively small topographic differences. Except as affected by distance from the Great Lakes, the climate is comparatively uniform. Thus, climatic data for Rochester are reasonably applicable to most other parts of the county.

The annual precipitation ranges from about 29 inches in the extreme northwest to nearly 32 inches in the southeastern quarter of the county. About 40 to 45 percent of the annual total is received during the growing season, May through September.

Proximity to the Great Lakes is an important factor in the amount of snowfall. Airflow across the open water of the lakes during the cold months results in frequent, and often heavy, snowfall over the adjacent land areas. These storms are characterized by substantial snowfall over wide areas and heavy amounts in one or more local areas. The intensity of these storms tends to diminish late in winter when a greater part of the lake surface is frozen.

The climate favors much cloudiness in winter. Severe hailstorms and high winds are not serious hazards to life and property. High winds often accompany snowstorms,

and travel is greatly hampered at times by blowing and drifting snow.

Physiography, Relief, and Drainage

The northern part of the county is a nearly level to gently sloping lake plain. Except for the ridges of glacial till, this plain is dominantly the lakebed of old glacial Lake Iroquois. West of the Genesee River, it ranges from $4\frac{1}{2}$ to 8 miles in width, and overall, it slopes gently toward the lake at a gradient of about 25 feet to the mile. It is crossed by a number of small streams that occupy rather shallow valleys. These streams flow in a generally north-easterly direction and empty into Lake Ontario. West in this plain are numerous low ridges and small, circular or elliptical hills that range from 5 to 50 feet or more above the general level of the plain. East of the Genesee River, the lake plain ranges from 2 to 5 miles in width, and, as a whole, lies at a slightly higher elevation above Lake Ontario than in the western part. There are also more lake bluffs near Lake Ontario in this part of the lake plain. The edges of the plain along the Genesee River, Irondequoit Bay, and other major drainageways are steep and heavily dissected by small drainageways.

Just south of the lake plain is the beach ridge formed by glacial Lake Iroquois. This beach ridge crosses the county in a generally east-west direction. Typically, it is made up of outwash sand and gravel. Areas of this sand and gravel extend southward along the major drainageways from the beach ridge, and there are extensive deposits in the towns of Greece, Parma, and Ogden.

South of the beach ridge, most areas are made up of end moraines, till plains, and drumlins. Intermingled in these areas are small lakebeds and alluvial flood plains. The slope range in this area is nearly level to steep. Kame-and-kettle relief is dominant in the Mendon Ponds area and in small areas in other parts of the county.

The elevation is 246 feet above sea level on Lake Ontario, about 400 feet on the lake plain, and a maximum of 900 feet in some areas that have drumlin relief.

Monroe County is in the drainage system of the St. Lawrence River. Most of the rivers, large streams, and creeks have a dendritic or branching pattern. The Genesee River, which is the major stream, crosses the county from

south to north. It meanders through a level to nearly level valley about 1 to 2 miles wide, but where the river passes over a series of falls in the center of Rochester, the valley narrows to a gorge. The main tributaries of the Genesee River are Oatka Creek, Honeoye Creek, Red Creek, and Black Creek, all of which flow into the river south of the city of Rochester.

The smaller streams typical of the lake plain in the northern part of the county generally flow directly into Lake Ontario. Mainly, they have a relatively flat gradient, and they originate near the old glacial beach ridge or just north of the Lockport limestone escarpment. The flood plains along these streams are restricted.

Most of the streams south of the beach ridge flow into the Genesee River or Irondequoit Creek, which empty into Lake Ontario. Irondequoit Creek drains the southeastern part of Monroe County and flows into Irondequoit Bay. Irondequoit Bay, which was the preglacial outlet of the Genesee River, also drains much of the area south of the beach ridge. It forms a deep indentation in the shore of Lake Ontario.

Geology

The most prominent geologic features in Monroe County are those related to the ice age or the Pleistocene Epoch, which began about a million years ago. These features are the result of material accumulated and deposited during the last stage of glaciation, which is the Wisconsin Stage. This stage occurred about 10,000 years ago, and some evidence indicates that it may have persisted until as recently as 5,000 years ago.

Less conspicuous than the glacial features, but equally significant, are the various bedrock formations* that underlie all the soils of the county. In shallow soils, bedrock governs the topography of the area. Generally, it also influences the nature of the glacial deposits. All the bedrock is sedimentary; it is made up of material deposited in ancient seas. The dip is toward the south at a gradient of approximately 60 feet per mile, but locally, there are some extreme variations.

Both glacial geology and bedrock geology are discussed briefly in this section.

GLACIAL GEOLOGY.—As the glacial ice receded, a series of relatively short-lived postglacial lakes formed. These lakes extended southward from the glacial front and generally drained toward the east. The oldest postglacial lake that affected Monroe County was Lake Warren. About the only remnants of this lake are the sandy deposits at the highest elevations in the southeastern corner of the county, near Baker Hill.

The next postglacial lake was Lake Dana, which formed as the moraine built up when the receding ice stopped for a time. The ice stopped along a line that extended from Albion in Orleans County to Rochester, and the resulting moraine now parallels Highland Avenue in Rochester. The remnants of this lake are the red clay deposits in the town of Henrietta and the sandy deposits in the Turk-Baker Hill area. The outflow channel from this lake is not evident in Monroe County, but the kames in Mendon Ponds

were probably small islands during the existence of this lake.

The next postglacial lake was the relatively small, shallow Lake Scottsville, which remained after the ice had receded northward and Lake Dana had drained. The remnants of this lake are the silty deposits that extend along the present Genesee River from the Genesee Valley Park south past the county line and for a short distance westward along Black Creek.

Postglacial Lake Dawson began to form as Lake Scottsville drained northward through the moraine. The level of Lake Dawson dropped as the glacier continued its northward recession and Lake Scottsville drained. The most conspicuous remnant of Lake Dawson is its outflow channel, which passes through the village of Fairport.

The last postglacial lake was Lake Iroquois, the predecessor of Lake Ontario. Apparently, it persisted for a longer time than most of the other lakes because it developed a well-defined beach ridge. This ridge generally coincides with the present Ridge Road (U.S. Route 104). Immediately north of the ridge is a well-defined sand plain that extends across the county in an east-west direction.

Interspersed with the remnants of the glacial lakes are other glacial deposits. Among these deposits are drumlins, moraines, eskers, and kames, which also occur throughout the county.

BEDROCK GEOLOGY.—The oldest bedrock formation is Queenston Shale. This formation is red and fairly soft, but it is interspersed with hard, greenish-gray layers. The material in which this shale formed was deposited more than 410 million years ago during the last stages of the Ordovician Period.

Medina Sandstone overlies Queenston Shale. This sandstone is believed to have formed, at least in part, from material similar to that in which Queenston Shale formed, but after the fine particles had been removed. The sandstone is red but is interspersed with some light-green layers. The entire formation is quite hard. This material was deposited somewhat less than 410 million years ago, during the oldest part of the Silurian period.

Formations of the Clinton Group overlie the Medina Sandstone. These formations consist of relatively thin shale, shaly sandstone, and beds of limestone. In this group, the formations range from the light gray green of the Thorold Sandstone to the red of the Furnaceville Formation and the nearly black of the Williamson Shale. At the top of the Clinton Group is Lockport Dolomite. This dolomite is gray and hard. All of these formed in materials deposited during a period ranging from more than 350 million to less than 410 million years ago, generally about the middle of the Silurian period.

Above the Lockport Dolomite are other shale or shaly formations, the first or oldest of which is the black Pittsford Shale that underlies intermingled beds of red Vernon Shale and green Camillus Shale. Because the seas were quite salty when the beds were laid down, there are extensive deposits of salt and gypsum associated with Vernon Shale and Camillus Shale. At the top of this group of shaly formations is the gray Bertie Waterlime that formed in material deposited at the close of the Silurian period.

The youngest rock formation in the county is Onondaga Limestone. This limestone is light gray, and it contains layers of hard, flinty chert. It appears that some material

*The areas of the county underlain by the various bedrock formations are shown on the "Geologic Map of Monroe County, N.Y.," published by the Monroe County Division of Regional Planning.

5 of 7

4

The C horizon color ranges from dark brown (7.5YR 4/4 to brown (10YR 5/3, 7.5YR 4/4). Fine sand extends to a depth of 4 to 6 feet or more, but contrasting layers of clay, silt, gravel, or glacial till may be present at lower depths. Faint mottling is present in places in the upper part of the C horizon, but it is generally present at greater depths.

The Colonie soils are most commonly associated geographically with the moderately well drained Elnora soils that formed in similar material, the well-drained Arkport soils that formed in material with a higher proportion of very fine sand and silt, and the moderately well drained Claverack soils that formed in moderately deep sand deposits over clay. The Colonie soils are near the Dunkirk soils, which are well drained and formed in silty lacustrine sediments. They are also near Alton soils, which formed in gravelly beach and sandbar deposits.

Colonie loamy fine sand, 0 to 6 percent slopes (Co8).—This level to gently sloping soil is the dominant Colonie soil in the county and has the profile described as representative of the series. It occupies the beach and sandbar areas associated with old glacial lakes and the tops of the deltaic deposits associated with the outflow channels of these lakes. Most areas exceed 10 acres in size and generally are irregularly oblong in shape. Several individual areas are larger than 100 acres in size.

This soil normally contains few inclusions of other soils. The finer textured Arkport soils, which are more erodible and have a higher available water capacity, are common inclusions in the deltaic landscape. A deep sandy soil, dominantly of medium sand, is also a common inclusion. The moderately well drained Elnora or somewhat poorly drained Minoa soils are included in slight depressions. Where this soil is adjacent to fine lacustrine deposits, the moderately well drained Claverack soils are included in spots where the sand deposit is less than 40 inches thick. Also included are small areas having short, complex, gentle slopes.

This soil is suited to crops, pasture, and woodland. It is suitable for specific fruit crops. Lack of moisture is the major limitation to the use of this soil. Measures to control soil blowing are generally needed if the soil is cropped intensively. (Capability unit IIIs-1; woodland suitability group 4s1)

Colonie loamy fine sand, 6 to 12 percent slopes (CoC).—This soil occupies the more sloping areas and some of the side slopes of the deltaic and sandbar deposits. Individual areas are generally greater than 10 acres in size, but few areas are as large as 100 acres.

This soil normally contains comparatively few inclusions of other soils. The finer textured Arkport soils, which are more erodible and have a higher available water capacity, are commonly included in the deltaic landscape. An unnamed deep sandy soil, dominantly of medium sand, is another common inclusion. In the town of Webster, a few small areas of gravelly Alton soils are included. A few small eroded areas of Colonie soil and dunelike areas of gently sloping and sloping Colonie soils in a complex arrangement are included with this soil because of their small total acreage.

This soil is poorly suited to most crops and moderately suited to specific fruit crops. Droughtiness, susceptibility to soil blowing, and slope limit the use of this soil for crops. (Capability unit IVs-1; woodland suitability group 4s1)

Colonie loamy fine sand, 12 to 20 percent slopes, eroded (CoD3).—The profile of this soil differs from that described as representative of the series because the original surface layer is generally thinner or absent. This

moderately steep soil occupies dunelike areas, the steep side slopes of the deltaic deposits, and the slopes of areas where water erosion has caused extensive dissection. Shallow gullies are numerous. Individual areas are generally about 10 acres in size. There are no large areas.

The dominant inclusions with this soil in mapping are Arkport soils on comparable slopes. Included are common spots of both wind- and water-deposited material accumulated from eroded areas. Areas having complex topography with slopes ranging from gentle to steep are included because of their small total acreage. Some small areas that are underlain by gravel deposits at a depth of 3 to 4 feet are minor inclusions.

This soil is not suited to crops but can be used for some trees. Slope, droughtiness, and the hazard of continuing erosion limit use of this soil. (Capability unit VIIIs-1 woodland suitability group 4s2)

Cosad Series

The Cosad series is made up of deep, somewhat poorly drained, coarse-textured, level soils. These soils formed in sandy deltaic or lacustrine deposits that are underlain by high-lime lacustrine clay. They occur in depressions in old glacial lakebeds or bordering the lakebeds.

A representative Cosad soil has a surface layer, about 8 inches thick, of very dark gray loamy fine sand. Underlying this is a very friable, slightly acid subsurface layer that extends to a depth of 13 inches. This layer is light yellowish-brown loamy fine sand that is mottled with olive yellow and brownish yellow. The subsoil is slightly acid and 17 inches thick. It is pale-brown loamy fine sand that is highly mottled with yellowish brown, pale yellow, grayish brown, and light gray. The calcareous substratum begins at a depth of 30 inches. It is pale-olive silty clay with a few yellowish-brown and brown mottles. A few thin bands of silty material that are lighter in color than the clay are present in the substratum. These silt bands have no definite arrangement and increase in number at a depth below 40 inches.

A seasonal high water table is within 6 to 12 inches of the surface and is perched above the slowly permeable substratum. Permeability of the surface layer and subsoil is rapid. The depth of soil available for rooting is mainly 15 to 24 inches. The root zone corresponds to the height of the seasonal high water table early in the growing season and to the depth to the calcareous substratum as the water table recedes. The available water capacity is very low to moderate in the sandy upper part of the profile but is generally more than sufficient for plant growth. Somewhat poor drainage is one of the major limitations to the use of these soils for farming.

Representative profile of Cosad loamy fine sand in a drained and cultivated area, located 3,000 feet east of East River Road and 2,500 feet south of Erie Station Road (State Route 253), town of Henrietta:

Ap—0 to 8 inches, very dark gray (10YR 3/1) loamy fine sand; weak, fine, granular structure; very friable; medium acid; clear, smooth boundary.

A2—8 to 13 inches, light yellowish-brown (2.5Y 6/4) loamy fine sand; common, medium, distinct and prominent mottles of olive yellow (2.5Y 6/8) and brownish yellow (10YR 6/8); very weak, medium, subangular blocky structure; very friable; slightly acid; gradual, wavy boundary.

B2—13 to 30 inches, pale-brown (10YR 6/3) loamy fine sand; common, fine and medium, distinct and prominent mottles of olive yellow (2.5Y 6/8) and brownish yellow (2.5Y 7/4), light gray (10YR 7/2), and grayish brown (2.5Y 5/2); weak, medium, subangular blocky structure, grading to weak, platy structure with depth; friable; slightly acid; gradual, wavy boundary.

IIC—30 to 52 inches, pale-olive (5Y 6/4) silty clay; few, fine and medium, prominent mottles of yellowish brown (10YR 5/4) and brown (7.5YR 5/2); a few, thin silt lenses that are lighter in color and one-eighth inch to one-half inch thick; strong, medium and thick, platy structure caused by depositional varving; firm; calcareous.

The solum ranges in thickness from 20 to 36 inches. Depth to carbonates ranges from 30 to 44 inches. The texture is dominantly fine sand, with medium sand constituting less than 10 percent. The Ap horizon ranges from dark brown (7.5YR 3/2) to very dark grayish brown (2.5Y 3/2) and includes very dark gray (10YR 3/1) and dark brown (10YR 3/3). The A2 horizon ranges from brown (7.5YR 5/2) to pale yellow (2.5Y 7/4) in color, from dominantly loamy fine sand to loamy very fine sand in texture, and from medium acid to slightly acid in reaction.

The B horizon ranges from brown or dark brown (7.5YR 4/4) to light yellowish brown (2.5Y 6/4) and includes pale brown (10YR 6/3). The reaction of the B horizon is slightly acid or neutral, and the texture is loamy fine sand or fine sand. In some profiles a thin transitional zone with a sandy clay loam texture overlies the C horizon.

The IIC horizon ranges from weak red (2.5YR 4/2) to pale olive (5Y 6/4) in color and from silty clay to clay in texture. A 2- to 4-inch thick band of silty clay loam at the top of the C horizon is common. Bands or lenses of silt and fine sand and very fine sand are in this horizon. Gray or white streaks of precipitated lime are present in some areas. The C horizon is generally calcareous, but in some areas the reaction of the upper 2 to 4 inches is neutral.

The Cosad soils are most closely associated geographically with the moderately well drained Claverack soils that formed in similar material. Where the sandy cap is thin, Cosad soils are associated with the somewhat poorly drained Odessa and Rhinebeck soils, which formed in clay. Cosad soils are also associated with the moderately well drained Elnora and Galen soils, the somewhat poorly drained Minoa soils, and the poorly drained and very poorly drained Lamson soils, all of which formed in similar sandy material but lack the clayey substratum of the Cosad.

Cosad loamy fine sand (Cu).—This level or nearly level soil occupies basal areas adjacent to the slightly higher Claverack soils and receives runoff from those soils. The size of individual areas varies, but about half the total acreage is in areas larger than 10 acres in size. Areas range in shape from roughly square at the base of slopes to oblong in the well-defined, broad drainageways.

Commonly included with this soil in mapping are moderately well drained Claverack soils on small knobs at a slightly higher elevation. Where the sand deposit is deep enough, Minoa soils are included; where the Cosad soils have a high proportion of very fine sand and silt, Niagara soils are included; and where the sand deposit is less than 20 inches thick, small areas of clayey Odessa or Rhinebeck soils are included. Small inclusions of a poorly drained or very poorly drained soil that formed in material similar to that giving rise to the Cosad soils are subject to ponding during wet periods. Because of their limited acreage, some areas of a gently sloping Cosad soil are included. In a few included areas, this soil is underlain by compact, impermeable glacial till rather than by clay.

This soil is moderately suited to most of the commonly cultivated crops and to pasture and woodland. Drainage is the major management problem. Use of the soil for some deep-rooted crops and fruit trees is restricted by the shallow

seasonal high water table and the moderately shallow root zone. (Capability unit IIIw-2; woodland suitability group 4w1)

Cut and Fill Land

Cut and fill land (Cw) consists of nearly level to very steep areas where at least the upper 3 feet of soil material has been removed and used as fill material for construction projects. The exposed material remaining is dominantly loamy, mostly with little or no profile development. Most areas are adjacent to the New York State Thruway or along the interstate highway system, or adjacent to large urban developments.

Included in this mapping unit are some areas that have a clayey texture. These inclusions may present problems if the land is developed for farming.

Because these areas are generally calcareous on the surface, establishing a vegetative cover can be a problem. In places, if adequately treated, the areas can be used for some kinds of farming or for nonfarming uses. Most areas should have onsite investigation to determine the feasibility of proposed uses. (Capability unit and woodland suitability group not assigned)

Dunkirk Series

In the Dunkirk series are deep, well-drained soils that have a medium-textured surface layer and a medium-textured to moderately fine textured subsoil. The soils formed in medium- to high-lime, lacustrine very fine sand and silt with some clay. They occupy areas in old glacial lakebeds that were covered with moderately shallow water and are associated primarily with the Genesee River and Irondequoit Creek drainage areas. These gently sloping to steep soils have both simple and complex slopes that are dominantly convex.

A representative gently sloping Dunkirk soil has a surface layer, about 6 inches thick, of very dark grayish-brown silt loam. It is underlain by a medium acid, brown silt loam subsurface layer that extends to a depth of 12 inches. The subsurface layer is firm in place and friable when removed. The firm, medium acid subsoil is 19 inches thick. The upper 5 inches is brown silt loam, and the lower 14 inches is brown to dark-brown silty clay loam. The substratum begins at a depth of 31 inches and consists of layers of silt and clay that are very pale brown, reddish brown, and dark reddish brown. The substratum is medium acid in the upper part and becomes calcareous with depth.

A seasonal high water table is generally deeper than 48 inches. The depth of soil available for rooting is 30 to 36 inches. Available water capacity is high. Permeability is moderate in the surface layer and upper part of the subsoil, moderately slow in the lower part of the subsoil, and variable in the substratum. These soils are among the most erodible in the county, and extensive measures for controlling erosion are needed even on the gentle slopes.

Representative profile of Dunkirk silt loam, 2 to 6 percent slopes, in a cultivated area, located 200 feet south and 800 feet west of the junction of State Route 31 and Mitchell Road, town of Pittsford:

Ap—0 to 6 inches, very dark grayish-brown (10 YR 3/2) silt loam; weak, fine, granular structure, but tends to-

between the Onondaga Limestone and the underlying Bertie Waterlime may have been removed through erosion. The material in which the Onondaga Limestone formed is believed to have been deposited less than 350 million years ago in the earlier stages of the Devonian Period.

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Glossary

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well-aerated soil is similar to that in the atmosphere; but that in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in single mass or cluster. Natural soil aggregates such as crumbs, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alluvium. Soil material, such as sand, silt, or clay, that has been deposited on land by streams.

Available water capacity. The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil.

Calcareous soil. A soil containing enough calcium carbonate (often with magnesium carbonate) to effervesce (fizz) visibly when treated with cold, dilute hydrochloric acid.

Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Coarse fragments. Rock or mineral particles larger than 2 millimeters in diameter. Terms used to describe coarse fragments are—

Gravel.—Rounded fragments less than 3 inches in diameter.

Channery fragments.—Angular fragments as much as 6 inches in size along the longer axis.

Cobblestones.—Rounded fragments 3 to 10 inches in diameter.

Stones.—Rounded fragments 10 inches or more in diameter and flat fragments that are 15 inches or more in size along the longer axis.

Coarse-textured soils. Soils that have a texture such as sand or loamy sand.

Consistence, soil. The feel of the soil and the ease with which a lump can be crushed by the fingers. Terms commonly used to describe consistence are—

Loose.—Noncoherent when dry or moist; does not hold together in a mass.

Friable.—When moist, crushes easily under gentle pressure between thumb and forefinger and can be pressed together into a lump.

Firm.—When moist, crushes under moderate pressure between thumb and forefinger, but resistance is distinctly noticeable.

Plastic.—When wet, readily deformed by moderate pressure but can be pressed into lump; will form a "wire" when rolled between thumb and forefinger.

Sticky.—When wet, adheres to other material, and tends to stretch somewhat and pull apart, rather than to pull free from other material.

Hard.—When dry, moderately resistant to pressure; can be broken with difficulty between thumb and forefinger.

Soft.—When dry, breaks into powder or individual grains under very slight pressure.

Cemented.—Hard and brittle; little affected by moistening.

Contour farming. Plowing, cultivating, planting, and harvesting in rows that are at right angles to the natural direction of the slope or that are parallel to terrace grade.

Contour stripcropping. Growing crops in strips that follow the contour or are parallel to terraces or diversions. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

Diversion, or diversion terrace. A ridge of earth, generally a terrace, that is built to divert runoff from its natural course and, thus, to protect areas downslope from the effect of runoff.

Drainage class (natural). Drainage that existed during the development of the soil, as opposed to altered drainage, which is commonly the result of artificial drainage or irrigation but may be caused by the sudden deepening of channels or the blocking of drainage outlets. Seven different classes of natural soil drainage are recognized.

Excessively drained soils are commonly very porous and rapidly permeable and have a low water-holding capacity.

Somewhat excessively drained soils are also very permeable and are free from mottling throughout their profile.

Well-drained soils are nearly free from mottling and are commonly of intermediate texture.

Moderately well drained soils commonly have a slowly permeable layer in or immediately beneath the solum. They have uniform color in the A horizon and upper part of the B horizon and have mottling in the lower part of the B horizon and in the C horizon.

Somewhat poorly drained soils are wet for significant periods but not all the time. If Podzolic, they commonly have mottling at a depth below 6 to 16 inches, in the lower part of the A horizon, and in the B and C horizons.

Poorly drained soils are wet for long periods; they are light gray and generally mottled from the surface downward, but some have few or no mottles.

Very poorly drained soils are wet nearly all the time. They have a dark-gray or black surface layer and are gray or light gray, with or without mottling, in the deeper parts of the profile.

Drift (geology). Material of any sort deposited by geologic processes in one place after having been removed from another; includes drift materials deposited by glaciers and by streams and lakes associated with them.

Eolian soil material. Earthy parent material accumulated through wind action; commonly refers to sandy material in dunes or to loess in blankets on the surface.

Elevation. The movement of material from one place to another

Reference 4

January 27, 1993

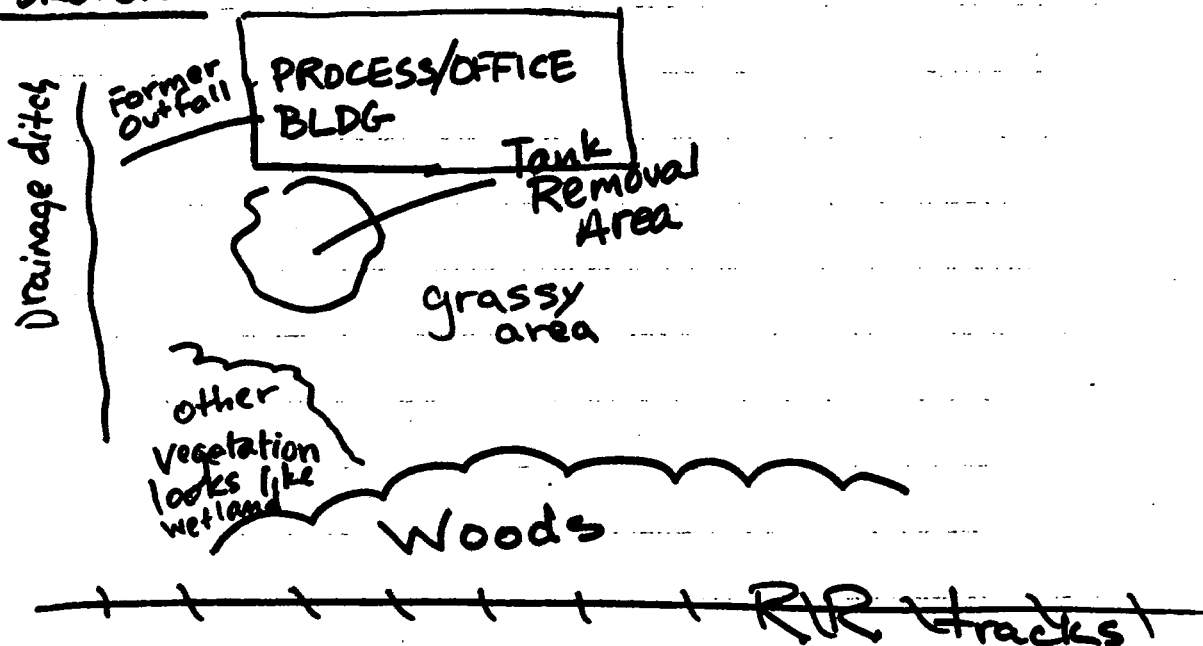
Time: 8:00 a.m.

Weather: Cold, clear, windy

Nearest Residence: \approx .5 mile southeast and northwest

Surface Water: Unnamed drainage ditch to west

Site Sketch



3 tanks removed - perforating oil, waste solvent, trichloroethane
 \approx W/ \approx 160 tons soil

Wells installed groundwater 2' - 14'

by O'Brien & Gere - report not complete - \approx 1 more month

Site visit attended by: Ellen Coyne - Attorney (716) 454-5370

Michael Rick - Fac. Rep.

Pete Hoffmire - NYDEC

Valerie Morra - Skeladia

Khadi Irani - Skeladia

Mr. Hoffmire indicates that he believes there is groundwater contamination and the company does not want to share the consultant's preliminary results for that reason

1 of 1

Reference 5

ERDLE PERFORATING COMPANY, INC.
Soil and Groundwater Sampling Report
February, 1987

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APPENDIX A - Analytical Report

APPENDIX B - Field Work Tables

APPENDIX C - Diagram C-1
Diagram C-2

INTRODUCTION:

This report contains information pertaining to a soil and groundwater sampling program at Erdle Perforating Company, Inc. The program was conducted January 6-9, 1987, by Day Engineering of Rochester, New York.

Erdle Perforating Company is involved in the manufacture of various types of perforated metal sheets. Erdle uses a variety of lubricants in its perforating processes. These lubricants are removed from the finished product through degreasing. Trichloroethene is used as the degreasing solvent. At the time of this study, waste trichloroethene was accumulated in an underground tank behind the building, prior to shipment off-site for disposal. The tank was installed for this purpose in the late 1960's or early 1970's. The capacity of the tank is about 2000 gallons.

Erdle also generates waste cutting oil, which is accumulated in another underground tank prior to shipment off-site for disposal. This tank is installed next to the waste solvent accumulation tank.

The soil and groundwater sampling program was conducted to determine if halogenated solvents are present in the soils and

groundwater in the vicinity of the underground tanks. The purpose of this environmental assessment was to identify potential exposures, and to develop a corrective action plan if warranted.

Since the time of the sampling, the tank has been emptied and taken out of service because it failed an initial air pressure test on February 5, 1987. The test was conducted because water had been found in the waste solvent, indicating groundwater infiltration. The determination was made that the tank was unfit for use. It was decided that, although it was not known whether a release had occurred, the incident would be treated for reporting purposes as a release of hazardous waste to the environment.

The incident was reported that day to Mr. Paul Lindenfelser of the Region 8 Office of the New York State Department of Environmental Conservation, and to Mr. Doug Kodama of the Region II Office of the United States Environmental Protection Agency at approximately 4:30 p.m. A written incident report was submitted to the Department of Environmental Conservation February 18, 1987.

FIELD WORK DESCRIPTION:

Three bore hole locations were selected to represent conditions in the vicinity of the underground waste solvent accumulation tank. One location in front of the building was used to represent background levels in the area (see Diagram 1).

During the sampling program, temperatures were generally just above freezing, and the ground was wet much of the time. Also, there was intermittent light precipitation, mainly in the form of wet snow or rain. Little or no frozen soil was encountered.

The borings were performed using a hand-held power-driven auger. The auger bit and each 3-foot extension were cleaned in the field before use with a deionized water rinse, followed by a methanol rinse, and a final rinse of deionized water. Between boring locations, the auger bit and each 3-foot extension were scrubbed with detergent and rinsed. In addition, the auger bit was cleaned using the methanol rinse method described above.

Soil samples were obtained using a standard split-spoon soil coring tool. The spoon was driven through the soil using a free-falling hammer. The hammer fell through a vertical drop of 22 inches along a hexagonal shaft. The number of blows required to drive the spoon twelve inches was recorded for each core as an indication of soil density.

SAMPLE BORING LOCATIONS ERDLE PERFORATING CO., INC.

Scale: 1" = 80'

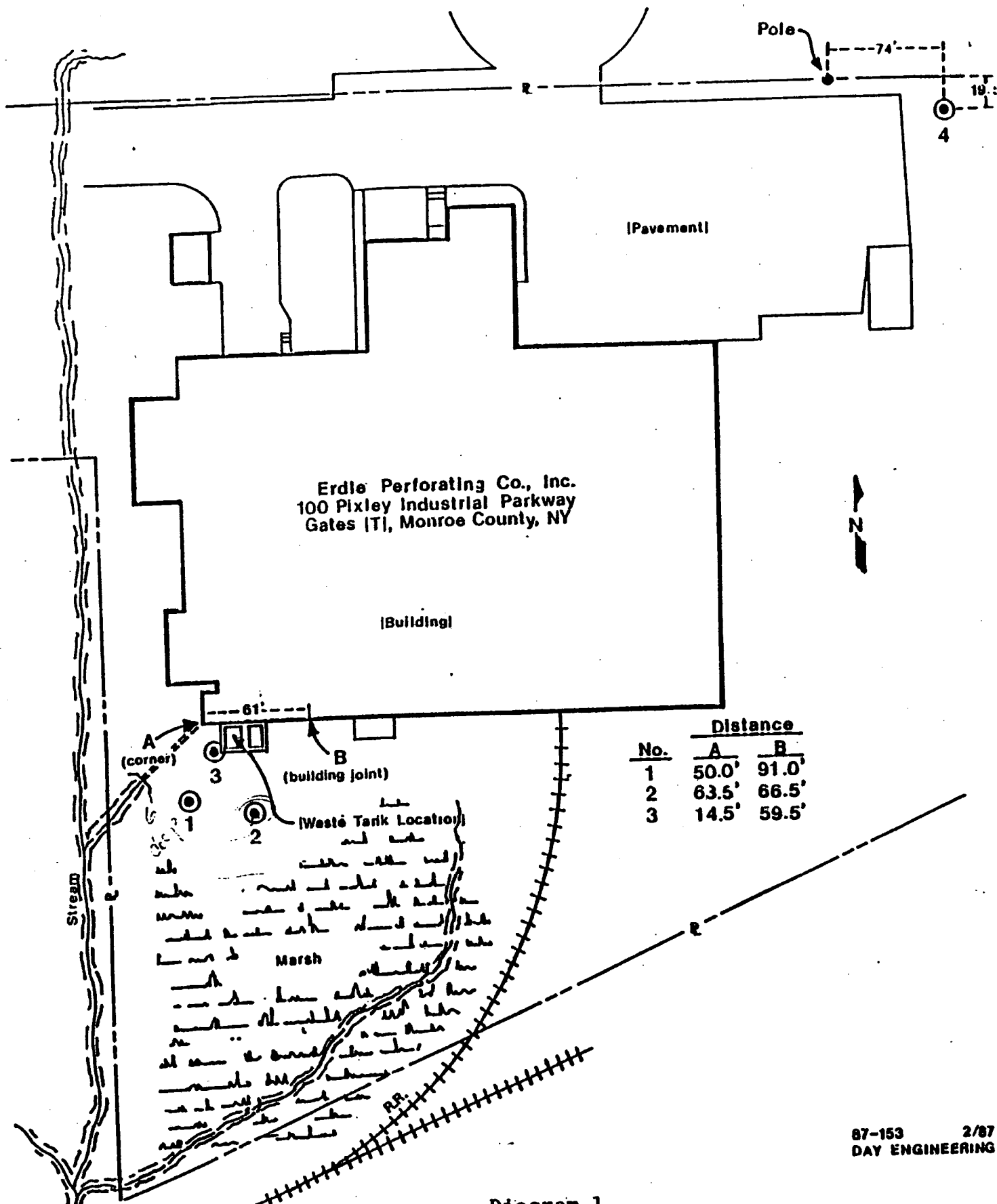


Diagram 1

During the field work, each soil sample was characterized in terms of soil type and texture. These evaluations appear in Tables B-1 through B-4 in Appendix B..

At each location, soil samples were taken at depths of approximately one foot, three feet and five feet. (Note: At Location 4, samples were taken at the one foot and three foot depths only.) Representative portions of each of the three individual soil samples were composited for each location and transported to the laboratory for analysis. These composites were analyzed for purgeable halocarbons (601 Series) and purgeable aromatics (602 series). Also, a representative sample from each depth was archived for future analysis, if desired.

At Location 3, an individual sample was also taken at a depth of seven feet and saved for analysis. The purpose of this sample was to further define the clay layer encountered three to five feet below grade. This sample has not been analyzed and was not included in the composite for Location 3.

At each location, the bore hole extended into the saturated soil zone. Each bore hole was pumped dry. On January 9, the depth to groundwater was measured at each sampling location (see Table B-5 in Appendix B). Groundwater samples were then obtained using

a bottom-filling teflon bailer. The groundwater samples were also analyzed for purgeable halocarbons and purgeable aromatics.

After each groundwater sample was taken, the depth of the bore was measured. All four holes had collapsed substantially (see Table B-5 in Appendix B). The bores were then filled in with soil and leveled.

Cleaning methods for the sampling and compositing equipment included scrubbing to remove soil, a tap or deionized water rinse, methanol rinse, and deionized water final rinse.

In accordance with EPA and DEC protocol, the samples were stored in pre-cleaned 40-ml. glass vials with teflon septums and caps. They were preserved in the field by cooling and handled by chain-of-custody with proper documentation. The samples were transported to General Testing Corporation for analysis. General Testing has a NYS Laboratory Certification ID# 10145, and is also certified by the State of New Jersey.

The composite soil samples and the groundwater samples were analyzed in accordance with Federal Regulations: 40 CFR Part 136 - Appendix A "Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater." Samples were prepared and extraction

DISCUSSION OF RESULTS:

The complete analytical report on the soil and groundwater sampling is contained in Appendix A, including the Quality Control data and chain-of-custody documentation. A discussion of the parameters of interest is presented below.

Soil Samples:

The parameters of interest are trichloroethene and 1,2-dichloroethene. Trichloroethene is the degreasing solvent used at Erdle. The presence of 1,2-dichloroethene may be a result of the breakdown of trichloroethene in the soil.

The levels of the parameters of interest found in the soil composites are displayed in Table 1. Note, due to a laboratory misunderstanding, two separate soil composites from Location 1 were analyzed, and the results for each sample are displayed.

The highest levels of each of these parameters were found in Location 3, which is approximately four to six feet from the waste trichloroethene tank (see Diagram 1). The levels are approximately 50% lower at Location 2, which is approximately 50 feet south-southeast of Location 3. The contaminant levels are even lower at Location 1, which is located near the stream, about 35 feet south-southwest of Location 3. The trichloroethene

concentration at this location was below the method detection limit of 5 µg/kg. Neither of the parameters of interest was detected in the background sample (Location 4).

A hardpan clay layer begins at a depth of approximately three to five feet below grade. Based on the one-foot soil core taken at a depth of seven feet at Location 3, this clay layer extends to a depth of at least eight feet (see Table B-3).

No purgeable aromatics were detected in any of the composite samples.

Groundwater Samples:

The parameters of interest in the groundwater samples are also trichloroethene and 1,2-dichloroethene. The results for these two parameters are shown in Table 2. Again, the highest levels were found immediately adjacent to the tank (Location 3). The levels found at Locations 2 and 3 were lower by one to two orders of magnitude. 1,2-Dichloroethene was found at higher levels than trichloroethene in all three locations behind the building.

Neither of the parameters of interest were detected at Location 4 (background). Also, no purgeable aromatics were detected in any of the groundwater samples.

RECOMMENDATIONS:

The following initial response actions are recommended for implementation.

1. The waste trichloroethene tank must be removed as soon as is practicable. At the time of removal of the tank, the integrity of the clay soil zone within the pit area should be visually evaluated.
2. A surface water and sediment sampling program is also recommended. This sampling should be performed at each of the four locations shown in Diagram 2. The proposed sampling locations are identified as A through D. Location A will be used to provide background information on concentrations of the parameters of interest in the stream. Location B will provide information on localized contributions from the area containing the waste trichloroethene tank. Location C will provide information regarding the standing marsh water south of the building. Location D will provide information regarding the presence of these organic constituents in the stream effluent leaving the property.

PROPOSED WATER / SEDIMENT SAMPLING LOCATIONS

ERDLE PERFORATING CO., INC.

Scale: 1in = 80ft.

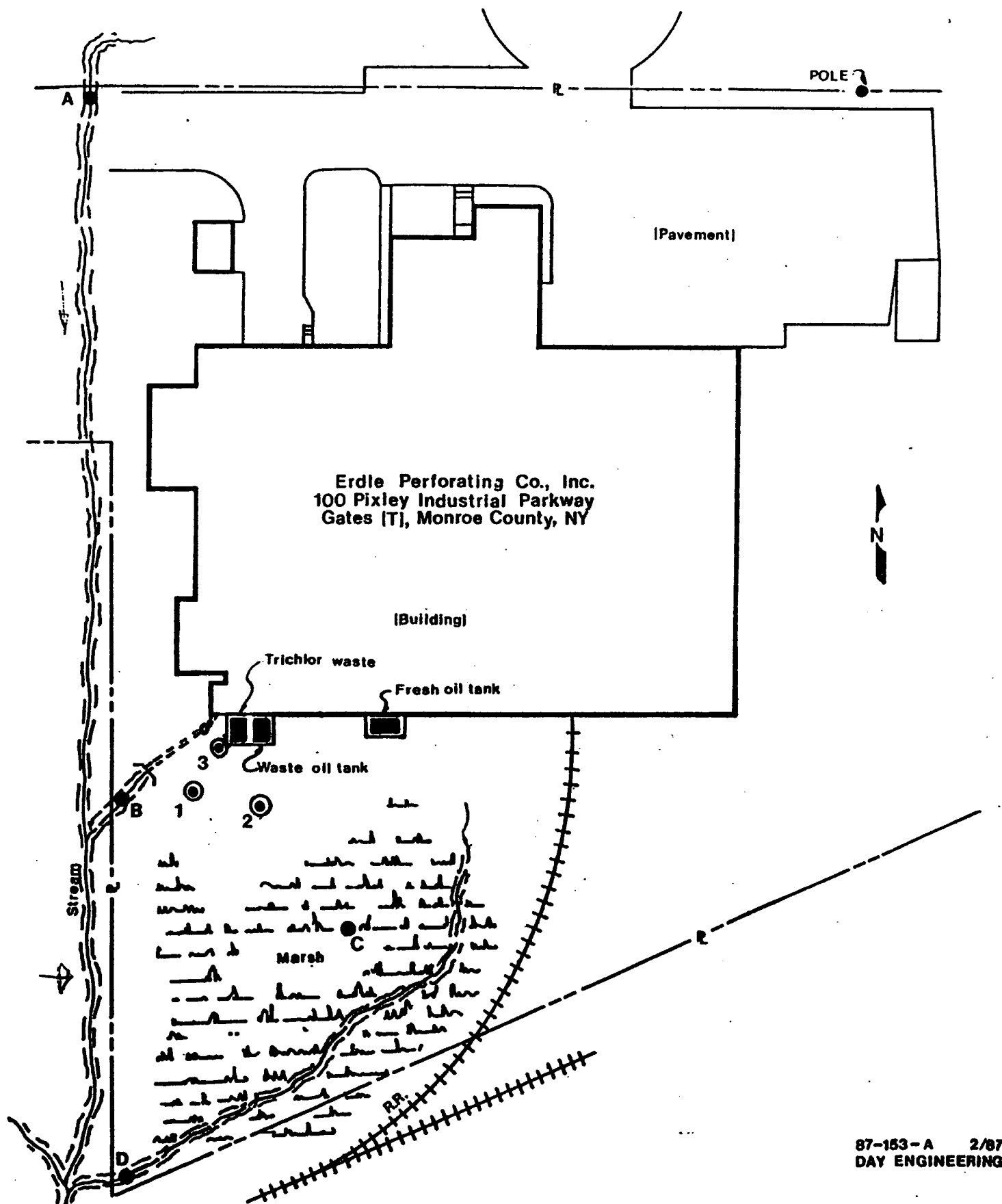
87-153-A 2/87
DAY ENGINEERING

Diagram 2

general testing corporation

710 Exchange Street
Rochester, NY 14608
(716) 454-3760

85 Trinity Place
Hackensack, NJ 07601
(201) 488-5242

LABORATORY REPORT

Job No. 70034 Date 2/3/87

Client **Bruce Peachy**
Day Engineering
700 Exchange St.
Rochester, NY 14608

Sample(s) Reference **Erdle Perforating**
Priority Pollutant Data
29 Purgeable Halocarbons
(Volatile Organic Halogens)

Date Samples (x) received () collected by General Testing 1/9/87

ANALYTICAL RESULTS, ug/kg

P.O. # _____

Sample Description	A 1 - Soil Composite	B 1 - Soil Composite	C 2 - Soil Composite	D 3 - Soil Composite
Analysis * by GC Method 601 (in order of elution)				
Date(s) Collected	1/6/87	1/6/87	1/7/87	1/7/87
Time(s) Collected	15:15	15:15	11:15	14:30
Date Analyzed	1/20/87	1/20/87	1/20/87	1/20/87
Chloromethane	<25	<25	<25	<25
Bromomethane	<25	<25	<25	<25
Dichlorodifluoromethane	<25	<25	<25	<25
Vinyl Chloride	<25	<25	<25	<25
Chloroethane	<25	<25	50 ✓	74 ✓
Methylene Chloride	<5	<5	<5	<5
Trichlorofluoromethane	<5	<5	<5	<5
1,1-Dichloroethane	<5	<5	<5	<5
1,1-Dichloroethane	<5	<5	<5	45 ✓
1,2-Dichloroethane	<5	<5	630 ✓	1400 ✓
Chloroform	<5	<5	<5	<5
1,2-Dichloroethane	<5	<5	<5	<5
1,1,1-Trichloroethane	<5	<5	<5	28 ✓
Carbon Tetrachloride	<5	<5	<5	<5
Bromodichloromethane	<5	<5	<5	<5
1,2-Dichloropropane	<5	<5	<5	<5
1,3-Dichloropropene (Trans)	<5	<5	<5	<5
1,3-Dichloropropene (Cis)	<10	<10	<10	<10
1,1,2-Trichloroethane	<10	<10	<10	<10
1,1,2-Trichloroethane	<10	<10	<10	<10
Bromoform	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	<5	<5	14 ✓	56 ✓
1,3-Dichlorobenzene (m)	<10	<10	<10	<10
1,3-Dichlorobenzene (o)	<10	<10	<10	<10
1,4-Dichlorobenzene (p)	<10	<10	<10	<10

* EPA 40 CFR Part 136 10/84

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 16th Edition and Methods for Chemical Analysis of Water and Wastes, EPA (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

NY LABORATORY CERTIFICATION ID #: 10145
NJ ID #: 73331 in Rochester; ID #: 02317 in Hackensack

Marshall Harris
Laboratory Director

Am1

general testing corporation

LABORATORY REPORT

Client Bruce Peachy
Day Engineering
700 Exchange St.
Rochester, NY 14608

710 Exchange Street
Rochester, NY 14608
(716) 454-3760

85 Trinity Place
Hackensack, NJ 07601
(201) 488-5242

Job No. 70034 Date 2/3/87

Sample(s) Reference Erdle Perforating
Priority Pollutant Data
7 Purgeable Aromatics

Date Samples () received () collected by General Testing 1/9/87

ANALYTICAL RESULTS, ug/kg

P.O. # _____

Sample Description
Analysis * by GC Method 602

Date(s) Collected
Time(s) Collected
Date Analyzed

A	B	C	D
1 - Soil Composite	1 - Soil Composite	2 - Soil Composite	3 - Soil Composite
1/6/87	1/6/87	1/7/87	1/7/87
15:15	15:15	11:15	14:30
1/20/87	1/20/87	1/20/87	1/20/87

2-1
2-2
2-3
2-4
2-5
2-6
2-7

Benzene

Toluene

Ethylbenzene

Chlorobenzene

1,4-Dichlorobenzene

1,3-Dichlorobenzene

1,2-Dichlorobenzene

Additional Compounds eluting but not on 602 list

2-8

p-Xylene

2-9

m-Xylene

2-10

o-Xylene

<5	<5	<5	<5
<5	<5	<5	<5
<5	<5	<5	<5
<10	<10	<10	<10
<10	<10	<10	<10
<10	<10	<10	<10
<10	<10	<10	<10
<5	<5	<5	<5
<5	<5	<5	<5
<5	<5	<5	<5

* EPA 40 CFR Part 136 1Q/84

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA. (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

NY LABORATORY CERTIFICATION ID #: 10145

NJ ID #: 73331 in Rochester; ID #: 02317 in Hackensack

Marshall Manno

Ass't

Laboratory Director

Assign

*general testing
corporation*

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85 Trinity Place
Hackensack, NJ 07601
(201) 488-5242

LABORATORY REPORT

Job No. 70034 Date 2/3/87

Client Bruce Peachy
Day Engineering
700 Exchange St.
Rochester, NY 14608

Sample(s) Reference	Erdle Perforating
---------------------	-------------------

Surrogate Standard Recoveries For EPA Method 601/602

Date Samples (x) received () collected by General Testing 1/9/87

ANALYTICAL RESULTS

(mg/l unless stated otherwise)

P.O. # _____

[illegible]

*EPA 40 CFR Part 136 10/84

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

NY LABORATORY CERTIFICATION ID #: 10145
NJ ID #: 73331 In Rochester, ID #: 02317 In Hackensack

Marshall Ma

Laboratory Director

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water and wastewater testing specialists

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corporation**

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Hackensack, NJ 07601
(201) 488-5242

LABORATORY REPORT

Job No. 70034 Date 2/3/87

Client **Bruce Peachy**
Day Engineering
700 Exchange St.
Rochester, NY 14608

Sample(s) Reference **Erdle Perforating**
Priority Pollutant Data
29 Purgeable Halocarbons
(Volatile Organic Halogens)

Date Samples (x) received () collected by General Testing 1/9/87

ANALYTICAL RESULTS, ug/kg

P.O. # _____

Sample Description

Analysis * by GC Method 601
(In order of elution)

E
4 - Soil
Composite

Date(s) Collected

1/8/87

Time(s) Collected

10:00

Date Analyzed

1/28/87

1-1
-2
-3
1-4
-5
-6
1-7
1-8
-9
10
1-11
12
13
1-14
-15
16
-17
1-18
19
20
1-21
-22
23
1-24
1-25
26
27
1-28
29

Chloromethane

<25

Bromomethane

<25

Dichlorodifluoromethane

<25

Vinyl Chloride

<25

Chloroethane

<25

Methylene Chloride

<5

Trichlorofluoromethane

<5

1,1-Dichloroethene

<5

1,1-Dichloroethane

<5

1,2-Dichloroethane

<5

Chloroform

<5

1,2-Dichloroethane

<5

1,1,1-Trichloroethane

<5

Carbon Tetrachloride

<5

Bromodichloromethane

<5

1,2-Dichloropropane

<5

1,3-Dichloropropene (Trans)

<5

Trichloroethene

<5

1,3-Dichloropropene (Cis)

<10

Dibromochloromethane

<10

1,1,2-Trichloroethane

<10

2-Chloroethanol

<10

Bromoform

<10

1,1,2,2-Tetrachloroethane

<5

Tetrachloroethene

<5

Chlorobenzene

<10

1,3-Dichlorobenzene (m)

<10

1,2-Dichlorobenzene (o)

<10

1,4-Dichlorobenzene (p)

<10

* EPA 40 CFR Part 136 10/84

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 18th Edition and Methods for Chemical Analysis of Water and Wastes, EPA (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

NY LABORATORY CERTIFICATION ID #: 10145

NJ ID #: 73331 in Rochester; ID #: 02317 in Hackensack.

Markell Manno

Laboratory Director

Asst

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general testing corporation

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Hackensack, NJ 07601
(201) 488-5242

LABORATORY REPORT

Client Bruce Peachy
Day Engineering
700 Exchange St.
Rochester, NY 14608

Job No. 70034

Date 2/3/87

Sample(s) Reference
Priority Pollutant Data
7 Purgeable Aromatics

Erdle Perforating

Date Samples (☒) received (☐) collected by General Testing 1/9/87

ANALYTICAL RESULTS, ug/kg

P.O. # _____

Sample Description
Analysis * by GC Method 602

E
4 - Soil
Composite

Date(s) Collected
Time(s) Collected
Date Analyzed


1/8/87
10:00
1/28/87

2-1	Benzene	<5
2-2	Toluene	<5
2-3	Ethylbenzene	<5
2-4	Chlorobenzene	<10
2-5	1,4-Dichlorobenzene	<10
2-6	1,3-Dichlorobenzene	<10
2-7	1,2-Dichlorobenzene	<10

Additional Compounds eluting but
not on 602 list

2-8	p-Xylene	<5
2-9	m-Xylene	<5
2-10	o-Xylene	<5

*EPA 40 CFR Part 136 10/84
Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.
NY LABORATORY CERTIFICATION ID #: 10145
NJ ID #: 73331 in Rochester, ID #: 02317 in Hackensack


Laboratory Director

Ass't

**general testing
corporation**

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(201) 488-5242

LABORATORY REPORT

Job No. 70034 Date 2/3/87

Client Bruce Peachy
Day Engineering
700 Exchange St.
Rochester, NY 14608

Sample(s) Reference	Erdle Perforating
---------------------	-------------------

Surrogate Standard Recoveries For EPA Method 601/602

Date Samples (X) received () collected by General Testing 1/9/87

ANALYTICAL RESULTS

(mg/l unless stated otherwise)

P.O. # _____

[illegible]

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA-(C) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

NY LABORATORY CERTIFICATION ID #: 10145

Marshall Means
Laboratory Director

Asa³

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(201) 488-5242

LABORATORY REPORT

Job No. 70034 Date 2/3/87

Client **Bruce Peachy**
Day Engineering
700 Exchange St.
Rochester, NY 14608

Sample(s) Reference **Erdle Perforating**

Priority Pollutant Data
29 Purgeable Halocarbons
(Volatile Organic Halogens)

Date Samples (x) received () collected by General Testing 1/9/87

ANALYTICAL RESULTS, ug/l

P.O. # _____

Sample Description	F 4 - Water	G 2 - Water	H 1 - Water	I 3 - Water
Analysis * by GC Method 601 (in order of elution)				
Date(s) Collected	1/9/87	1/9/87	1/9/87	1/9/87
Time(s) Collected	08:30	09:15	09:45	10:00
Date Analyzed	1/20/87	1/20/87	1/21/87	1/20/87
Chloromethane	<5	<50	<50	<50
Bromomethane	<5	<50	<50	<50
Dichlorodifluoromethane	<5	<50	<50	<50
Vinyl Chloride	<5	<50	<50	460 ✓
Chloroethane	<1	<10	<10	57 ✓
Methylene Chloride	<1	<10	<10	<10
Trichlorofluoromethane	<1	<10	<10	<10
1,1-Dichloroethene	<1	<10	<10	57 ✓
1,1-Dichloroethane	<1	<10	<10	64,600 ✓
1,2-Dichloroethene	<1	<10	<10	<10
Chloroform	<1	<10	<10	<10
1,2-Dichloroethane	<1	<10	<10	<10
1,1,1-Trichloroethane	<1	<10	<10	<10
Carbon Tetrachloride	<1	<10	<10	<10
Bromodichloromethane	<1	<10	<10	<10
1,2-Dichloropropane	<1	<10	<10	<10
1,3-Dichloropropene (Trans)	<1	<10	<10	<10
Trichloroethene	<1	<10	<10	4800 ✓
1,3-Dichloropropene (Cis)	<2	<20	<20	<20
Dibromochloromethane	<2	<20	<20	<20
1,1,2-Trichloroethane	<2	<20	<20	<20
2-Chloro-1,1,1-trichloroethane	<2	<20	<20	<20
Bromoform	<2	<20	<20	<20
1,1,2,2-Tetrachloroethane	<1	<10	<10	<10
Tetrachloroethene	<1	<10	<10	62 ✓
Chlorobenzene	<2	<20	<20	<20
1,3-Dichlorobenzene (m)	<2	<20	<20	<20
1,3-Dichlorobenzene (o)	<2	<20	<20	<20
1,4-Dichlorobenzene (p)	<2	<20	<20	<20

* EPA 40 CFR Part 136 10/84

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

NY LABORATORY CERTIFICATION ID #: 10145

NJ ID #: 73331 in Rochester; ID #: 02317 in Hackensack.

Marshall Shanno

Asst. Laboratory Director

general testing corporation

710 Exchange Street
Rochester, NY 14608
(716) 454-3760

85 Trinity Place
Hackensack, NJ 07601
(201) 488-5242

LABORATORY REPORT

Job No. 70034 Date 2/3/87


Client **Bruce Peachy**
Day Engineering
700 Exchange St.
Rochester, NY 14608

Sample(s) Reference **Erdle Perforating**
Priority Pollutant Data
7 Purgeable Aromatics

Date Samples (☒ received (☐ collected by General Testing 1/9/87

P.O. # _____		ANALYTICAL RESULTS, ug/l			
Sample Description		F	G	H	I
Analysis * by GC Method 602		4 - Water	2 - Water	1 - Water	3 - Water
Date(s) Collected		1/9/87	1/9/87	1/9/87	1/9/87
Time(s) Collected		08:30	09:15	09:45	10:00
Date Analyzed		1/20/87	1/20/87	1/21/87	1/20/87
2-1	Benzene	<1	<10	<10	<10
2-2	Toluene	<1	<10	<10	<10
2-3	Ethylbenzene	<1	<10	<10	<10
2-4	Chlorobenzene	<2	<20	<20	<20
2-5	1,4-Dichlorobenzene	<2	<20	<20	<20
2-6	1,3-Dichlorobenzene	<2	<20	<20	<20
2-7	1,2-Dichlorobenzene	<2	<20	<20	<20
Additional Compounds eluting but not on 602 list					
2-8	p-Xylene	<1	<10	<10	<10
2-9	m-Xylene	<1	<10	<10	<10
2-10	o-Xylene	<1	<10	<10	<10

* EPA 40 CFR Part 136 10/84
Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.
NY LABORATORY CERTIFICATION ID #: 10145
NJ ID #: 73331 in Rochester; ID #: 02317 in Hackensack


Laboratory Director

*general testing
corporation*

85 Trinity Place
Hackensack, NJ 07801
(201) 488-5242

Job No. 70034 Date 2/3/87

Sample(s) Reference	Erdle Perforating
---------------------	-------------------

Surrogate Standard Recoveries For EPA Method 601/602

Date Samples (x) received () collected by General Testing 1/9/87

P.O. # _____

(mg/l unless stated otherwise)

[illegible]

* EPA 40 CFR Part 138 10/84
Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA (C) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

NY LABORATORY CERTIFICATION ID #: 10146

Marshall Moore

Ass. Laboratory Director

TABLE B-5

Field Information

	<u>Bore Hole Location Number</u>			
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
Bore hole depth	78"	72"	96"	60"
Depth to groundwater	11"	7"	9"	7"
Boring depth at time of groundwater sampling	25"	22"	36"	25"

Reference 6

ERDLE PERFORATING COMPANY, INC.
Underground Tank and Soil Excavation
July, 1987

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APPENDICES:

- Appendix A - Laboratory Report: Waste Tank Excavation
Pit Samples
- Appendix B - Laboratory Report: Fresh Oil Tank Excavation
Pit Samples
- Appendix C - Laboratory Report: Surface Water and Sediment
Samples
- Appendix D - Soil Investigation Report: (FACT Technical
Services, 1969)
- Appendix E - Photographs of Tank Removal Project
- Appendix F - Manifest Documentation

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FIGURES:

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Figure 2 - Waste Tank Excavation Pit Sampling Locations...	12
Figure 3 - Surface Water/Sediment Sampling Locations.....	17

Surface Water and Sediment Sampling

Surface water samples and sediment samples were collected on February 27, 1987. The sampling locations are shown in Figure 3. The samples were sent to General Testing Corporation for analysis.

The surface water samples were analyzed in accordance with Federal Regulations: 40 CFR Part 136 - Appendix A "Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater." Specifically, Method 601 "Purgeable Halocarbons" was used to determine unknown concentrations using the gas chromatograph. The sediment samples were analyzed using Method 8010, outlined in EPA Manual SW-846, "Test Methods for Evaluating Solid Waste."

The laboratory report, including quality control data, for the surface water and sediment sampling is included in Appendix C. The results are summarized in Table 3 and Table 4.

Location A (upstream of the building), Location C (in the marshy area south of the building), and Location D (where the marsh water leaves the property) showed no detectable levels of the "parameters of concern" in the water or sediment.

Location B, where a tributary of the stream leaves the Erdle property, showed the presence of chlorinated solvents in both the water and sediment.

A concrete cooling water basin is located near the area where the underground waste tanks were located. This basin discharges to Location B via an underground pipe. Basins of this type are usually not constructed to be watertight. Soil Sample H, which was collected from the excavated pit wall near this basin (refer to Figure 2 - West Wall) showed the presence of 25 ppm of

SURFACE WATER / SEDIMENT SAMPLING LOCATIONS

ERDLIE PERFORATING CO., INC.

Scale: 1 in = 80 ft.

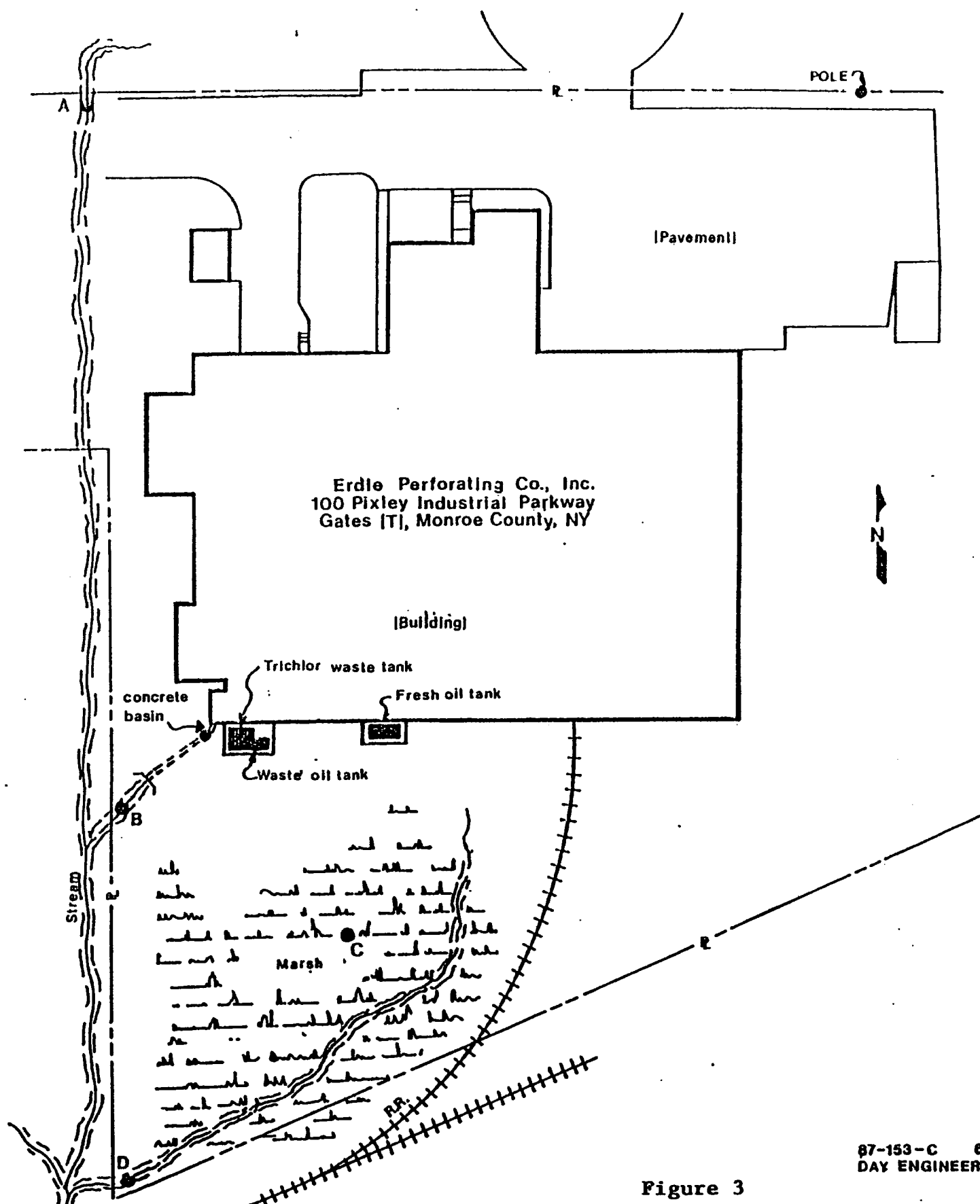
87-153-C 6/87
DAY ENGINEERING

Figure 3

water and wastewater testing specialists

general testing
corporation710 Exchange Street
Rochester, NY 14608
(716) 454-376085 Trinity Place
Hackensack, N.J. 07601
(201) 488-5242

LABORATORY REPORT

Job No. 70888 Date 5/11/87

Sample(s) Reference

Priority Pollutant Data

29 Purgeable Halocarbons

(Volatile Organic Halogens)

Erdle Perforating

Mr. Bruce Peachey
Engineering
100 Exchange Street
Rochester, NY 14608

Samples (x) received () collected by General Testing 4/14/87

P.O. # _____

Sample Description

Analysis * by GC Method 601

(in order of elution)

Date(s) Collected

Time(s) Collected

Date Analyzed

Chloromethane

Bromomethane

Dichlorodifluoromethane

Vinyl Chloride

Chloroethane

Methylene Chloride

Trichlorofluoromethane

1,1-Dichloroethene

1,1-Dichloroethane

1,2-Dichloroethene

Chloroform

1,2-Dichloroethane

1,1,1-Trichloroethane

Carbon Tetrachloride

Bromodichloromethane

1,2-Dichloropropane

1,3-Dichloropropene (Trans)

Trichloroethene

1,3-Dichloropropene (Cis)

Dibromochloromethane

1,1,2-Trichloroethane

2-Chloroethylvinyl Ether

Bromoform

1,1,2,2-Tetrachloroethane

Tetrachloroethene

Chlorobenzene

1,3-Dichlorobenzene (m)

1,2-Dichlorobenzene (o)

1,4-Dichlorobenzene (p)

ANALYTICAL RESULTS,

ug/kg

D	E	F	G
Floor East	East Wall Lower	Floor West	Floor South
4/14/87	4/14/87	4/14/87	4/14/87
10:00	10:00	10:00	10:00
4/24/87	4/24/87	4/24/87	4/24/87

<20	<20	<20	<20
20,600	660	1800	31,400
1600	<10	32,500	26,000
270	<10	730	170

* EPA 40 CFR Part 136 10/84
Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

NY LABORATORY CERTIFICATION ID #: 10145

NJ ID #: 73331 in Rochester; ID #: 02317 in Hackensack

Michael K. Perry

Laboratory Director

general testing corporation

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(716) 454-3760

85 Trinity Place
Hackensack, NJ 07601
(201) 488-5242

LABORATORY REPORT

Job No. 70888 Date 5/11/87

Sample(s) Reference

Surrogate Standard Recoveries
For EPA Method 601/602

Erdle Perforating

4/14/87

Bruce Peachey
Engineering
710 Exchange Street
Rochester, NY 14608

Samples (x) received () collected by General Testing

ANALYTICAL RESULTS

(mg/l unless stated otherwise)

Sample Description	D	E	F	G
	Floor East	East Wall Lower	Floor West	Floor South
Date(s)	4/14/87	4/14/87	4/14/87	4/14/87
Time(s)	10:00	10:00	10:00	10:00

% RECOVERY:

Bromochloromethane	110%	88%	80%	109%
2-Bromo-1-chloropropane	116%	106%	90%	106%

* EPA 40 CFR Part 136 10/84
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NY LABORATORY CERTIFICATION ID #: 10145
NJ ID #: 73331 in Rochester; ID #: 02317 in Hackensack.

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LABORATORY REPORT

Job No. 70888 Date 5/11/87

Client

Mr. Bruce Peachey
Day Engineering
700 Exchange Street
Rochester, NY 14608

Sample(s) Reference

Priority Pollutant Data
29 Purgeable Halocarbons
(Volatile Organic Halogens)
Erdle Perforating

Date Samples (x) received () collected by General Testing 4/14/87

ANALYTICAL RESULTS, ug/kg

P.O. # _____

Sample Description

Analysis • by GC Method 601
(in order of elution)

Date(s) Collected

Time(s) Collected

Date Analyzed

	H	I	J	K
	West	West	East	
	Wall	Wall	Wall	NW Corner
	Upper	Lower	Upper	Lower
	4/14/87	4/14/87	4/14/87	4/14/87
	10:00	10:00	10:00	10:00
	4/24/87	4/26/87	4/26/87	4/27/87
1-1 Chloromethane				
1-2 Bromomethane				
1-3 Dichlorodifluoromethane				
1-4 Vinyl Chloride	<20	<20	<100	<100
1-5 Chloroethane				
1-6 Methylene Chloride				
1-7 Trichlorofluoromethane				
1-8 1,1-Dichloroethene				
1-9 1,1-Dichloroethane	16,300	74	3500	1860
1-10 1,2-Dichloroethene				
1-11 Chloroform				
1-12 1,2-Dichloroethane				
1-13 1,1,1-Trichloroethane				
1-14 Carbon Tetrachloride				
1-15 Bromodichloromethane				
1-16 1,2-Dichloropropane				
1-17 1,3-Dichloropropene (Trans)	8990	82	180	1650
1-18 Trichloroethene				
1-19 1,3-Dichloropropene (Cis)				
1-20 Dibromochloromethane				
1-21 1,1,2-Trichloroethane				
1-22 2-Chloroethylvinyl Ether				
1-23 Bromoform				
1-24 1,1,2,2-Tetrachloroethane	91	<10	110	<50
1-25 Tetrachloroethene				
1-26 Chlorobenzene				
1-27 1,3-Dichlorobenzene (m)				
1-28 1,2-Dichlorobenzene (o)				
1-29 1,4-Dichlorobenzene (p)				

* EPA 40 CFR Part 136 10/84
Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.
NY LABORATORY CERTIFICATION ID #: 10145
NJ ID #: 73331 in Rochester; ID #: 02317 in Hackensack.

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(201) 408-5242

LABORATORY REPORT

Job No. 70888 Date 5/11/87

Sample(s) Reference

Surrogate Standard Recoveries For EPA Method 601/602

Erdle Perforating

Date Samples (☒) received (☐) collected by General Testing 4/14/87

ANALYTICAL RESULTS

(mg/l unless stated otherwise)

P.O. # _____

Sample Description

H	I	J	K
West	West	East	
Wall	Wall	Wall	NW Corner
Upper	Lower	Lower	Lower
4/14/87	4/14/87	4/14/87	4/14/87
10:00	10:00	10:00	10:00

Date(s)

Time(s)

% RECOVERY:

Bromochloromethane

2-Bromo-1-chloropropane

107%	109%	110%	88%
107%	100%	110%	90%

• EPA 40 CFR Part 136 10/84

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA (C) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

NY LABORATORY CERTIFICATION ID #: 10145

NJ ID #: 73331 in Rochester, ID #: 02317 in Hackensack.

Michael K. Perry

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(716) 454-3760

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LABORATORY REPORT

Job No. 70888 Date 5/11/87

Client

Mr. Bruce Peachey
Day Engineering
700 Exchange Street
Rochester, NY 14608

Sample(s) Reference

Priority Pollutant Data
29 Purgeable Halocarbons
(Volatile Organic Halogens)
Erdle Perforating
4/14/87

Date Samples (x) received () collected by General Testing

P.O. # _____

ANALYTICAL RESULTS, ug/kg

Sample Description

Analysis * by GC Method 601
(in order of elution)

Date(s) Collected

Time(s) Collected

Date Analyzed

	L	M	N	O
South Wall Lower E.	South Wall Upper E.	South Wall Lower W.	South Wall Upper W.	
4/14/87	4/14/87	4/14/87	4/14/87	
10:00	10:00	10:00	10:00	
4/27/87	4/27/87	4/27/87	4/29/87	
Chloromethane				
Bromomethane				
Dichlorodifluoromethane				
Vinyl Chloride				
Chloroethane	<100	<100	<100	<100
Methylene Chloride				
Trichlorofluoromethane				
1,1-Dichloroethene				
1,1-Dichloroethane				
1,2-Dichloroethene	33,900	2400	10,500	354,000
Chloroform				
1,2-Dichloroethane				
1,1,1-Trichloroethane				
Carbon Tetrachloride				
Bromodichloromethane				
1,2-Dichloropropane				
1,3-Dichloropropene (Trans)				
Trichloroethene	<50	520	6200	6,618,000
1,3-Dichloropropene (Cis)				
Dibromochloromethane				
1,1,2-Trichloroethane				
2-Chloroethylvinyl Ether				
Bromoform				
1,1,2,2-Tetrachloroethane				
Tetrachloroethene	<50	<50	<50	600,000
Chlorobenzene				
1,3-Dichlorobenzene (m)				
1,2-Dichlorobenzene (o)				
1,4-Dichlorobenzene (p)				

* EPA 40 CFR Part 136 10/84

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

NY LABORATORY CERTIFICATION ID #: 10145

NJ ID #: 73331 in Rochester; ID #: 02317 in Hackensack.

Michael K. Perry

Laboratory Director

85 Trinity Place
Hackensack, NJ 07601
(201) 488-5242

88%

184

water and wastewater testing specimens

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(201) 488-5242

LABORATORY REPORT

Job No. 708,88 Date 5/11/87

Sample(s) Reference

Priority Pollutant Data
29 Purgeable Halocarbons
(Volatile Organic Halogens)
Erdle Perforating

Client
Mr. Bruce Peachey
Day Engineering
700 Exchange Street
Rochester, NY 14608

Date Samples (x) received () collected by General Testing 4/14/87

ANALYTICAL RESULTS, ug/kg

P.O. #	P	(ug/l)
Sample Description	South	Lab
Analysis * by GC Method 601	Wall	Blank
(In order of elution)	Center	-
Date(s) Collected	4/14/87	-
Time(s) Collected	10:00	4/27/87
Date Analyzed	4/27/87	
Chloromethane		
Bromomethane		
Dichlorodifluoromethane		
Vinyl Chloride	<10	<2
Chloroethane		
Methylene Chloride		
Trichlorofluoromethane		
1,1-Dichloroethene		
1,1-Dichloroethane	170	<1
1,2-Dichloroethene		
Chloroform		
1,2-Dichloroethane		
1,1,1-Trichloroethane		
Carbon Tetrachloride		
Bromodichloromethane		
1,2-Dichloropropane		
1,3-Dichloropropene (Trans)	53	<1
Trichloroethene		
1,3-Dichloropropene (Cis)		
Dibromochloromethane		
1,1,2-Trichloroethane		
2-Chloroethylvinyl Ether		
Bromoform		
1,1,2,2-Tetrachloroethane	6.3	<1
Tetrachloroethene		
Chlorobenzene		
1,3-Dichlorobenzene (m)		
1,2-Dichlorobenzene (o)		
1,4-Dichlorobenzene (p)		

* EPA 40 CFR Part 136 10/84
Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.
NY LABORATORY CERTIFICATION ID #: 10145
NJ ID #: 73331 in Rochester; ID #: 02317 in Hackensack

Michael K. Perry

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LABORATORY REPORT

 Job No. 70888 Date 5/11/87

Client

 Mr. Bruce Peachey
 Day Engineering
 700 Exchange Street
 Rochester, NY 14608

Sample(s) Reference

 Surrogate Standard Recoveries
 For EPA Method 601/602

Erdle Perforating

 Date Samples (x) received () collected by General Testing 4/14/87

ANALYTICAL RESULTS

(mg/l unless stated otherwise)

P.O. # _____

Sample Description

P

 South
 Wall
 Center

 Lab
 Blank
Date(s) 4/14/87Time(s) 10:00

% RECOVERY:

Bromochloromethane

102%

82%

2-Bromo-1-chloropropane

105%

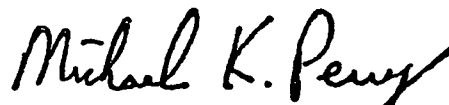
83%

* EPA 40 CFR Part 136 10/84

 Analytical procedures in accordance with Standard Methods for
 the Examination of Water and Wastewater, 15th Edition and Methods
 for Chemical Analysis of Water and Wastes, EPA (<) indicates lowest
 detectable concentration with procedure used. Data on quality
 control performed with above sample(s) is available upon request.

NY LABORATORY CERTIFICATION ID #: 10145

NJ ID #: 73331 in Rochester; ID #: 02317 in Hackensack


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LABORATORY REPORT

Job No. 70442 Date 3/11/87

Client

Mr. Joseph Steffen
Day Engineering
700 Exchange Street
Rochester, NY 14608

Sample(s) Reference

Priority Pollutant Data
29 Purgeable Halocarbons
(Volatile Organic Halogens)
Erdle Perforating

Date Samples (x) received () collected by General Testing 2/27/87

ANALYTICAL RESULTS, ug/l (ppb)

P.O. #

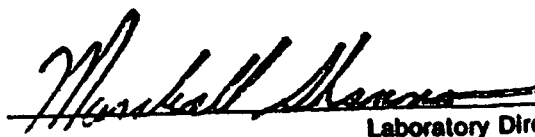
Sample Description	A	B	C	D
Analysis * by GC Method 601 (in order of elution)	Surface Water	Surface Water	Surface Water	Surface Water
Date(s) Collected	2/27/87	2/27/87	2/27/87	2/27/87
Time(s) Collected	12:00	12:00	13:00	13:00
Date Analyzed	3/5/87	3/5/87	3/5/87	3/5/87
Chloromethane	<5	<50	<5	<5
Bromomethane	<5	<50	<5	<5
Dichlorodifluoromethane	<5	<50	<5	<5
Vinyl Chloride	<2	<20	<2	<2
Chloroethane	<2	<20	<2	<2
Methylene Chloride	<1	<10	<1	<1
Trichlorofluoromethane	<1	<10	<1	<1
1,1-Dichloroethene	<1	<10	<1	<1
1,1-Dichloroethane	<1	<10	<1	<1
1,2-Dichloroethene	<1	23 ✓	7.8 ✓	3.5 ✓
Chloroform	<1	<10	<1	<1
1,2-Dichloroethane	<1	11	<1	<1
1,1,1-Trichloroethane	<1	<10	<1	<1
Carbon Tetrachloride	<1	<10	3.7 ✓	1.3 ✓
Bromodichloromethane	<1	<10	<1	<1
1,2-Dichloropropane	<1	<10	<1	<1
1,3-Dichloropropene (Trans)	<1	<10	<1	<1
Trichloroethene	<1	7.50	<1	<1
1,3-Dichloropropene (Cis)	<2	<20	<2	<2
Dibromochloromethane	<2	<20	<2	<2
1,1,2-Trichloroethane	<2	<20	<2	<2
2-Chloroethyl Vinyl Ether	<2	<20	<2	<2
Bromoform	<2	<20	<2	<2
1,1,2,2-Tetrachloroethane	<2	9.8	<2	<2
Tetrachloroethene	<1	<10	<1	<1
Chlorobenzene	<2	<20	<2	<2
1,3-Dichlorobenzene (m)	<2	<20	<2	<2
1,2-Dichlorobenzene (o)	<2	<20	<2	<2
1,4-Dichlorobenzene (p)	<2	<20	<2	<2
Elute Together				

* EPA 40 CFR Part 136.10/84

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA. (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

NY LABORATORY CERTIFICATION ID #: 10145

NJ ID #: 73331 in Rochester, ID #: 02317 in Hackensack.


 Laboratory Director

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LABORATORY REPORT

Job No. 70442 Date 3/11/87

Client

Mr. Joseph Steffen
Day Engineering
700 Exchange Street
Rochester, NY 14608

Sample(s) Reference

Surrogate Standard Recoveries
For EPA Method 601/602
Erdle Perforating

Date Samples (x) received () collected by General Testing 2/27/87

ANALYTICAL RESULTS

(mg/l unless stated otherwise)

P.O. #

Sample Description

	A	B	C	D
	Surface Water	Surface Water	Surface Water	Surface Water
Date(s)	2/27/87	2/27/87	2/27/87	2/27/87
Time(s)	12:00	12:00	13:00	13:00

% RECOVERY:

Bromochloromethane	84%	78%	94%	126% *
2-Bromo-1-chloropropane	88%	105%	100%	114%
a,a,a-Trifluorotoluene	114%	102%	113%	99%

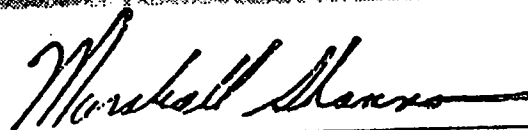
* Outside of Quality Control acceptance limits

* EPA 40 CFR Part 136 10/84

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

NY LABORATORY CERTIFICATION ID #: 10145

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Laboratory Director

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LABORATORY REPORT

Job No. 70443 Date 3/11/87

Client

Mr. Joseph Steffen
Day Engineering
700 Exchange Street
Rochester, NY 14608

Sample(s) Reference

Priority Pollutant Data
29 Purgeable Halocarbons
(Volatile Organic Halogens)
Erdle Perforating

Date Samples (x) received () collected by General Testing 2/27/87

ANALYTICAL RESULTS, ug/kg

P.O. # _____

Sample Description	A	B	C	D
Analysis * by GC Method 601 (in order of elution)	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Date(s) Collected	2/27/87	2/27/87	2/27/87	2/27/87
Time(s) Collected	13:00	13:00	14:00	14:00
Date Analyzed	3/6/87	3/6/87	3/6/87	3/6/87
Chloromethane	<25	<25	<25	<25
Bromomethane	<25	<25	<25	<25
Dichlorodifluoromethane	<25	<25	<25	<25
Vinyl Chloride	<10	<10	<10	<10
Chloroethane	<10	<10	<10	<10
Methylene Chloride	<5	<5	<5	<5
Trichlorofluoromethane	<5	<5	<5	<5
1,1-Dichloroethene	<5	<5	<5	<5
1,1-Dichloroethane	<5	<5	<5	<5
1,2-Dichloroethene	<5	1390	<5	<5
Chloroform	<5	120 ✓	<5	<5
1,2-Dichloroethane	<5	<5	<5	<5
1,1,1-Trichloroethane	<5	<5	<5	<5
Carbon Tetrachloride	<5	<5	<5	<5
Bromodichloromethane	<5	<5	<5	<5
1,2-Dichloropropane	<5	<5	<5	<5
1,3-Dichloropropene (Trans)	<5	<5	<5	<5
Trichloroethene	<5	1740 ✓	<5	<5
1,3-Dichloropropene (Cis)	<10	<10	<10	<10
Dibromochloromethane	<10	<10	<10	<10
1,1,2-Trichloroethane	<10	<10	<10	<10
2-Chloroethyl Vinyl Ether	<10	<10	<10	<10
Bromoform	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	<10	<10	<10	<10
Tetrachloroethene	<5	19	<5	<5
Chlorobenzene	<10	<10	<10	<10
1,3-Dichlorobenzene (m)	<10	<10	<10	<10
1,2-Dichlorobenzene (o)	<10	<10	<10	<10
1,4-Dichlorobenzene (p)	<10	<10	<10	<10
Elute Together				

• EPA 40 CFR Part 136 10/84

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA (C) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

NY LABORATORY CERTIFICATION ID #: 10145

NJ ID #: 73331 In Rochester ID #: 02317 In Hackensack.

Marshall Maness
Laboratory Director

Asi

**general testing
corporation**

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Rochester, NY 14608
(716) 454-3700

85 Trinity Place
Hackensack, NJ 07601
(201) 488-5242

LABORATORY REPORT

Job No. 70443 Date 3/11/87

Sample(s) Reference

Mr. Joseph Steffen
Day Engineering
700 Exchange Street
Rochester, NY 14608

Surrogate Standard Recoveries For EPA Method 601/602

Erdle Perforating

Date Samples (x) received () collected by General Testing

2/27/87

ANALYTICAL RESULTS

(mg/l unless stated otherwise)

P.O. # _____

*EPA 40 CFR Part 136 10/84

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA (<) Indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

NY LABORATORY CERTIFICATION ID #: 10145

NJ ID #: 73331 in Rochester, ID #: 02317 in Hackensack.

Marshall Hansen

Laboratory Director

Asi

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID AND HAZARDOUS WASTE
HAZARDOUS WASTE MANIFEST
P.O. Box 12820, Albany, New York 12212

Form Approved OMB No. 2000-0401 Exp. 12-31-86

1. Generator's US EPA No. NYD0002296999000011		Manifest Document No. 1		2. Page 1 of 1		Information in the shaded areas is not required by Federal Law.	
3. Generator's Name and Mailing Address Eidle Persuading Company, Inc. 100 Pixley Industrial Parkway, Rochester, NY 14603				A. State Manifest Document No. NY A 421599 3			
4. Generator's Phone (716) 247-4700				B. Generator's ID same			
5. Transporter 1 (Company Name) American Environmental Service, NY				C. State Transporter's ID 61837GP NY			
6. US EPA ID Number NYD980783815				D. Transporter's Phone (716) 491-8800			
7. Transporter 2 (Company Name)				E. State Transporter's ID			
8. US EPA ID Number				F. Transporter's Phone			
9. Designated Facility Name and Site Address Frontier Chemical Waste Process Inc. 4626 Royal Avenue Niagara Falls, NY 14303				G. State Facility's ID NYD043815703			
10. US EPA ID Number				H. Facility's Phone (716) 285-8208			
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)						12. Containers	13. Total Quantity
a. Hazardous Waste Liquid, n.o.s., ORM-E, NA 9189						No. 0,01 TT	Unit 3,000 G
b.							
c.							
d.							
14. Additional Descriptions for Materials Listed Above						K. Handling Codes for Wastes Listed Above	
FRONTIER CODE 1173-1165						B	
FRONTIER WORK ORDER 010-3859						LABOR	
15. Special Handling Instructions and Additional Information						WTS # 4034 AES # 425	
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and state laws and regulations.							
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002 (b) of RCRA, I also certify that I have a program in place to reduce volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.							
Printed/Typed Name Roy, Cori				Signature <i>[Signature]</i>			
17. Transporter 1 (Acknowledgement of Receipt of Materials)				Mo. Day Year 11/16/17			
Printed/Typed Name David Tisch				Signature <i>[Signature]</i>			
18. Transporter 2 (Acknowledgement of Receipt of Materials)				Mo. Day Year			
Printed/Typed Name				Signature			
19. Discrepancy Indication Space Unit has 30 to 50 gal hard residue remaining in Tanker.							
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.							
Printed/Typed Name David White				Signature <i>[Signature]</i>			

PRESS HARD—You Are Writing Through Light Copy

(See Reverse Side for Instructions)

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID AND HAZARDOUS WASTE
HAZARDOUS WASTE MANIFEST
P.O. Box 12820, Albany, New York 12212

Form Approved. OMB No. 2050 0039. Expires 9 30 89

Print or type.

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA No. N Y I D I 0 0 2 1 2 1 0 6 9 1 4 1 0 1 0 1 0 1		Manifest Document No. 1	2. Page 1 of 1		Information in the shaded areas is not required by Federal Law.	
3. Generator's Name and Mailing Address Erdle Perforating Company, Inc. 100 Pixley Industrial Parkway, Rochester, NY 14603					A. State Manifest Document No. NY A 503651 7			
4. Generator's Phone (716) 247-4700					B. Generator's ID same			
5. Transporter 1 (Company Name) Buffalo Fuel Corporation					C. State Transporter's ID X20716 NJ			
6. US EPA ID Number N Y I D I 0 5 1 1 8 0 9 9 5 2					D. Transporter's Phone (716) 773-1921			
7. Transporter 2 (Company Name)					E. State Transporter's ID			
8. US EPA ID Number					F. Transporter's Phone ()			
9. Designated Facility Name and Site Address SCA Chemical Services 1550 Balmer Road Model City, NY 14107					G. State Facility's ID			
10. US EPA ID Number N Y I D I 0 4 9 8 3 6 6 7 9					H. Facility's Phone (716) 754-8231			
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)					12. Containers		13. Total Quantity	
a. Hazardous Waste Solid, n.o.s., ORM-E, NA9189					No. Type		14. Unit (Wt/Vol)	
					01011 DIT		estimated 010020 Y F001	
b.								
c.								
d.								
15. Special Handling Instructions and Additional Information Product Code G02893 Work Order Number 116-881					K. Handling Codes for Wastes Listed Above			
J. Additional Descriptions for Materials listed Above soil and concrete contaminated with <1% trichloroethylene					a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input type="checkbox"/>			
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and state laws and regulations. If I am a large quantity generator, I certify that I have program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.					AES # 425			
Printed/Typed Name JAMES Shepard					Signature James Shepard		Mo. Day Year 11/24/87	
17. Transporter 1 (Acknowledgement or Receipt of Materials) Printed/Typed Name BERNARD L CLARK					Signature Bernard L Clark		Mo. Day Year 10/24/87	
18. Transporter 2 (Acknowledgement or Receipt of Materials) Printed/Typed Name					Signature		Mo. Day Year	
19. Discrepancy Indication Space								
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.					Mo. Day Year			

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID AND HAZARDOUS WASTE
HAZARDOUS WASTE MANIFEST
P.O. Box 12820, Albany, New York 12212

Form Approved. OMB No. 2050-0039 Expires 9/30/89

Use print or type.

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA No. NY10002720694400003		Manifest Document No.		2. Page 1 of 1		Information in the shaded area is not required by Federal Law									
3. Generator's Name and Mailing Address Erdle Perforating Company, Inc. 100 Pixley Industrial Parkway, Rochester, NY 14603						A. State Manifest Document No. NYA 503653											
4. Generator's Phone 716 247-4700						B. Generator's ID None											
5. Transporter 1 (Company Name) Buffalo Fuel Corporation						C. State Transporter's ID 567288											
6. US EPA ID Number NY10051809952						D. Transporter's Phone 716 773-10											
7. Transporter 2 (Company Name)						E. State Transporter's ID											
8. US EPA ID Number						F. Transporter's Phone											
9. Designated Facility Name and Site Address SCA Chemical Services 1550 Balmer Road Model City, NY 14107						G. State Facility's ID											
10. US EPA ID Number NY10043836570						H. Facility's Phone 716 754-8231											
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)						12. Containers No. Type		13. Total Quantity		14. Unit Wt/Vol		15. Waste No.					
a. Hazardous Waste Solid, n.o.s., ORM-E, NA9189						0101 31T		01010210		y		F001					
b.																	
c.																	
d.																	
16. Additional Descriptions for Materials Listed Above 10118 Concrete contaminated with 112 Trichloroethylene						17. Handling Codes for Wastes Listed Above Hazardous Waste Reactive Corrosive Flammable Toxic Other											
15. Special Handling Instructions and Additional Information Product Code G02893 Work Order Number 116-883						AES # 425											
18. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and state laws and regulations. If I am a large quantity generator, I certify that I have program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, If I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.																	
Printed/Typed Name James J. Shuman						Signature <i>[Signature]</i>				Mo. Day Y. 11/12/91							
17. Transporter 1 (Acknowledgement or Receipt of Materials)						Printed/Typed Name Jeffrey R. Schum				Signature <i>[Signature]</i>				Mo. Day Y. 11/12/91			
18. Transporter 2 (Acknowledgement or Receipt of Materials)						Printed/Typed Name				Signature				Mo. Day Y.			
19. Discrepancy Indication Space																	
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.																	
Printed/Typed Name						Signature				Mo. Day Y.							

(9/86) -71

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID AND HAZARDOUS WASTE

HAZARDOUS WASTE MANIFEST
P.O. Box 12820, Albany, New York 12212

Form Approved. OMB No. 2050-0039 Expires 9/2

Please print or type.

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA No. NY 0101022069440000		Manifest Document No. 1	2. Page 1 of 1	Information in the shaded area is not required by Federal law	
3. Generator's Name and Mailing Address Erdle Perforating Company, Inc. 100 Pixley Industrial Parkway, Rochester, NY 14603					A. State Manifest Document No. NY-A-503687		
4. Generator's Phone 716-247-4700					B. Generator's ID SAMS		
5. Transporter 1 (Company Name) Buffalo Fuel Corporation					C. State Transporter's ID 716-773		
6. US EPA ID Number NY 0101511810191512					D. Transporter's Phone 716-773		
7. Transporter 2 (Company Name)					E. State Transporter's ID		
8. US EPA ID Number					F. Transporter's Phone		
9. Designated Facility Name and Site Address SCA Chemical Services 1550 Balmer Road Model City, NY 14107					G. State Facility's ID 716-754-8231		
10. US EPA ID Number NY 0101491813161719					H. Facility's Phone		
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)					12. Containers	13. Total Quantity	14. Unit
					No.	Type	Wt/Vol
a. Hazardous Waste Solid, n.o.s., ORM-E, NA9189					0101	DLT	Y
b.							
c.							
d.							
15. Special Handling Instructions and Additional Information Product Code G02893 Work Order Number 116-885 AES# 425					16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and classification, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and state laws and regulations. If I am a large quantity generator, I certify that I have program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.		
17. Transporter 1 (Acknowledgement of Receipt of Materials)					18. Transporter 2 (Acknowledgement of Receipt of Materials)		
Printed/Typed Name JAMES SHARP					Signature James Sharp		
Printed/Typed Name					Signature		
19. Discrepancy Indication Space					20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.		
Printed/Typed Name					Signature		
Printed/Typed Name					Signature		

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID AND HAZARDOUS WASTE
HAZARDOUS WASTE MANIFEST
P.O. Box 12820, Albany, New York 12212

Form Approved. OMB No. 2050-0039. Expires 9-30-

See print or type.

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA No. NY0000220894400000	Manifest Document No.	2. Page 1 of 1	Information in the shaded area is not required by Federal Law.
3. Generator's Name and Mailing Address Erdle Perforating Company, Inc. 100 Pixley Industrial Parkway, Rochester, NY 14603		6. US EPA ID Number NY0000220894400000		A. State Manifest Document No. NY-A-503650	
4. Generator's Phone 716-247-4700		8. US EPA ID Number		B. Generator's ID SAME	
5. Transporter 1 (Company Name) Buffalo Fuel Corporation		10. US EPA ID Number		C. State Transporter's ID NY-T-111	
7. Transporter 2 (Company Name)		12. Containers		D. Transporter's Phone 716-773-1111	
9. Designated Facility Name and Site Address SCA Chemical Services 1550 Balmer Road Model City, NY 14107		13. Total Quantity		E. State Transporter's ID NY-T-111	
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)		14. Unit		F. Transporter's Phone 716-773-1111	
a. Hazardous Waste Solid, n.o.s., ORM-E, NAS189		No. Type		G. State Facility's ID NY-F-111	
b.		0 0 1 D T		H. Facility's Phone 716-754-0231	
c.					
d.					
15. Special Handling Instructions and Additional Information Product Code G02893 Work Order Number 116-882		16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and state laws and regulations.		17. Transporter 1 (Acknowledgement of Receipt of Materials)	
18. Transporter 2 (Acknowledgement of Receipt of Materials)		19. Discrepancy Indication Space		20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 18.	
Printed/Typed Name James Sheppard		Signature <i>James Sheppard</i>		Mo. Day 01 14	
Printed/Typed Name		Signature		Mo. Day	
Printed/Typed Name		Signature		Mo. Day	
Printed/Typed Name		Signature		Mo. Day	

(9/86) - 71

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID AND HAZARDOUS WASTE
HAZARDOUS WASTE MANIFEST
P.O. Box 12820, Albany, New York 12212

Form Approved OMB No. 2050-0039 Expires 5/30/91

Please print or type.

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA No. N Y D Q Q 2 2 0 0 9 4 4 0 0 0 4		Manifest Document No.	2. Page 1 of 1	Information in the shaded area is not required by Federal Law	
3. Generator's Name and Mailing Address Erdle Perforating Company, Inc. 100 Pixley Industrial Parkway, Rochester, NY 14603					A. State Manifest Document No. NY A 503654		
4. Generator's Phone (716) 247-4700					B. Generator's ID SAME		
5. Transporter 1 (Company Name) Buffalo Fuel Corporation					C. State Transporter's ID N Y D Q 5 1 9 0 9 0 5 2		
6. US EPA ID Number					D. Transporter's Phone (716) 773-11		
7. Transporter 2 (Company Name)					E. State Transporter's ID		
8. US EPA ID Number					F. Transporter's Phone		
9. Designated Facility Name and Site Address SCA Chemical Services 1550 Balmer Road Model City, NY 14107					G. State Facility's ID N Y D Q 4 9 8 3 6 6 7 9		
10. US EPA ID Number					H. Facility's Phone 716 754-8231		
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)				12. Containers	13. Total Quantity	14. Unit	15. Waste No.
a. Hazardous Waste Solid, n.o.s., ORM-E, NA9189				No. Type			
				0 0 1 D T		Y	E001
b.							
c.							
d.							
16. Additional Descriptions for Materials Listed Above soil & concrete contaminated with				17. Handling Codes for Wastes Listed Above			
18. Special Handling Instructions and Additional Information Product Code G02893 Work Order Number 116-884				AES# 425			
19. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and state laws and regulations. If I am a large quantity generator, I certify that I have program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.							
Printed/Typed Name JAMES Sheppard				Signature <i>James Sheppard</i>		Mo. Day 11/24	
17. Transporter 1 (Acknowledgement of Receipt of Materials)				Signature		Mo. Day	
Printed/Typed Name <i>James Sheppard</i>							
18. Transporter 2 (Acknowledgement or Receipt of Materials)				Signature		Mo. Day	
Printed/Typed Name							
19. Discrepancy Indication Space							
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.							
Printed/Typed Name				Signature		Mo. Day	

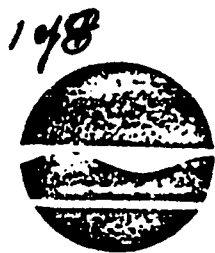
STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID AND HAZARDOUS WASTE
HAZARDOUS WASTE MANIFEST
P.O. Box 12820, Albany, New York 12212

Form Approved OMB No. 2000-0404 Expires 7-31-99

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA No. NYD90239679499906		Manifest Document No. 14003		2. Page 1 of 1		Information in the shaded areas is not required by Federal Law	
Generator's Name and Mailing Address Erdle Perserving Company Inc. 100 Pixie Industrial Parkway / Rochester NY				State Manifest Document No. NYA 4244163		Generator's ID 389C			
Generator's Phone 716 247-4700				Transporter 1 (Company Name) Bussell Fuel Corporation		US EPA ID Number NYD951899852		State Transporter's ID NYD951899852	
Transporter 2 (Company Name)				US EPA ID Number		State Transporter's ID		Transporter's Phone (if available)	
Designated Facility Name and Site Address CACHEMICAL SERVICES 1000 Belmont Road Model City, NY 14127				US EPA ID Number NYD947836678		State Facility's ID NYD947836678		Facility's Phone (if available)	
3. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number) Hazardous Waste Solids, n.e.s., ORM-E NA 9189				12. Containers No. Type 001 DT 2333		13. Total Quantity Y		14. Unit Y	
Additional Descriptions for Materials Listed Above				Handling Codes for Wastes Listed Above		NEW YORK STATE REQUIREMENT FOR ADDITIONAL INFORMATION		NEW YORK STATE REQUIREMENT FOR ADDITIONAL INFORMATION	
15. Special Handling Instructions and Additional Information Product Code G02873 Work Order Number 117-029				ATE # 425					
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and state laws and regulations. Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002 (b) of RCRA, I also certify that I have a program in place to reduce volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.									
Printed/Typed Name JAMES Shepard				Signature <i>[Signature]</i>		Mo. Day Year 11/24/97			
17. Transporter 1 (Acknowledgement of Receipt of Materials)				Printed/Typed Name Michael R. Smith		Signature <i>[Signature]</i>		Mo. Day Year 11/24/97	
18. Transporter 2 (Acknowledgement of Receipt of Materials)				Printed/Typed Name		Signature		Mo. Day Year	
19. Discrepancy Indication Space									
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.									
Printed/Typed Name				Signature		Mo. Day Year			

Reference 7

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233



Thomas C. Jorling
Commissioner

JAN 13 1988

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Erdle Perforating Co., Inc.
P.O. Box 1568
Rochester, New York 14603

Dear Sir/Madam:

As mandated by Section 27-1305 of the Environmental Conservation Law (ECL), copy enclosed, the New York State Department of Environmental Conservation (NYSDEC) must maintain a registry of all inactive disposal sites suspected or known to contain hazardous wastes. The ECL also mandates that this Department notify by certified mail the owner of all or any part of each site or area included in the Registry of Inactive Hazardous Waste Disposal Sites.

Our records indicate that you are the owner or part owner of the site listed below. Therefore, this letter constitutes notification of the inclusion of such site in the Registry of Inactive Hazardous Waste Disposal Sites in New York State.

DEC Site No.: 828072
Site Name: Erdle Perforating
Site Address: 100 Pixley Industrial Parkway, Gates, New York 14603-1568

Enclosed is a copy of the New York State Department of Environmental Conservation, Division of Hazardous Waste Remediation, inactive hazardous waste disposal site report form as it appears in the Registry and Annual Report, and an explanation of the site classifications. The law allows the owner and/or operator of a site listed in the Registry to petition the Commissioner of the New York State Department of Environmental Conservation for deletion of such site, modification of site classification, or modification of any information regarding such site, by submitting a written statement setting forth the grounds of the petition. Such petition may be addressed to:

Mr. Thomas C. Jorling
Commissioner
New York State Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-0001

278

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF HAZARDOUS WASTE REMEDIATION
INACTIVE HAZARDOUS WASTE DISPOSAL REPORT

CLASSIFICATION CODE: 2

REGION: 8

SITE CODE: 828072
EPA ID: NYD982531865

NAME OF SITE : Erdle Perforating

STREET ADDRESS: 100 Pixley Industrial Parkway

TOWN/CITY:

Gates

COUNTY:

Monroe

ZIP:

14603

SITE TYPE: Open Dump- Structure-X Lagoon- Landfill- Treatment Pond-
ESTIMATED SIZE: Acres

SITE OWNER/OPERATOR INFORMATION:

CURRENT OWNER NAME....: Erdle Perforating Co. Inc.

CURRENT OWNER ADDRESS.: PO Box 1568, Rochester, NY

OWNER(S) DURING USE....:

OPERATOR DURING USE....: Erdle Perforating Co. Inc.

OPERATOR ADDRESS.....: PO Box 1568, Rochester, NY

PERIOD ASSOCIATED WITH HAZARDOUS WASTE: From 1970 To 1980

SITE DESCRIPTION:

This company has generator status under RCRA. Spent waste TCE from degreasing was stored in a 2000 gallon underground tank outside of the southwest corner of the building. Soil and groundwater samples taken from soil borings in January 1987 showed contamination by TCE and other organic solvents. The highest levels of contamination were found adjacent to a tank at 4800 ppb trichloroethylene and 64,000 ppb of 1,2-dichloroethylene. The tanks, including a waste oil and virgin oil tank, were removed in April 1987 along with approximately 100 cubic yards of contaminated soils. The site has been referred to DEE in Buffalo for negotiation of an RI/FS.

HAZARDOUS WASTE DISPOSED: Confirmed-X
TYPE

Suspected-
QUANTITY (units)

Trichloroethylene
1,2 Dichloroethylene

unknown
unknown

SITE CODE: 828072

ANALYTICAL DATA AVAILABLE:

Air- Surface Water- Groundwater-X Soil-X Sediment-

CONTRAVENTION OF STANDARDS:

Groundwater-X Drinking Water- Surface Water- Air-

LEGAL ACTION:

TYPE...: Consent Order State- X Federal-
STATUS: Negotiation in Progress- X Order Signed-

REMEDIAL ACTION:

Proposed- Under design- In Progress- Completed-X
NATURE OF ACTION: Soil removal completed.

GEOTECHNICAL INFORMATION:

SOIL TYPE: Cosad loamy fine sand, Lamson very fine sandy loam
GROUNDWATER DEPTH: Approx. 1 to 7 feet

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:

Limited soil & groundwater data is available. Additional investigation is necessary to completely assess extent of contamination and to determine remedial alternatives.

ASSESSMENT OF HEALTH PROBLEMS:

On-site groundwater and soil were contaminated with waste oils and degreasing solvents which leaked from buried underground storage tanks. The tanks were removed in 1987. 1,2-Dichloroethene and trichloroethene were found at concentrations that exceeded New York State groundwater standards. The local community is served by a public water supply and there is no known use of the local groundwater aquifer as a source of drinking water.

448
Division of Solid and Hazardous Waste
New York State
Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233

RECEIVED

JUL 3 1985

SOLID WASTE
D.E.C. REG. #8

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION SUMMARY REPORT

Erdle Perforating
Site Name

828074
DEC Site ID Number
(Registry Sites Only)

100 Pixley Industrial Parkway
Address/County

SITE DESCRIPTION

Date of Visit

This facility used TCE as a degreasing solvent to remove cutting oil from metal parts. An approximately 2000 gal. underground waste TCE tank was removed from site in April, 1987 after it failed a tank tightness test. The tank was found to have several holes in it. Approximately 100 cubic yards of TCE contaminated soils were removed and disposed of as hazardous waste.

RECOMMENDED ACTION

Referral has been made to DEC for a consent order to further investigate and remediate site.

PRIORITY FOR FURTHER ACTION High ☒ Medium ☐ Low ☐

ADD TO REGISTRY ☒ Yes ☐ No 2 Suggested Classification

JUSTIFICATION (yes or no):

Confirmed disposal and contravention of groundwater standards by TCE at 6400 ~~ppb~~ ug/l. Groundwater was sampled from open soil borings in January 1987 during an environmental audit.

Prepared by: John A. Swanson
of DEC

Date: 11/19/87

7 of 8



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
C1 STATE XXXX C2 SITE NUMBER 828074

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A GROUNDWATER CONTAMINATION 02 ☒ OBSERVED DATE 1/8/87 ☐ POTENTIAL ☒ ALLEGED
03 POPULATION POTENTIALLY AFFECTED Unknown 04 NARRATIVE DESCRIPTION

Sampling of groundwater from on site soil borings on 1/8/87 showed contamination by TCE (4800 ug/l) and 1,2 DCE (64,600 ug/l). The local area is served by public water. It is not known if any wells exist.

01 ☐ B SURFACE WATER CONTAMINATION 02 ☐ OBSERVED DATE ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED 04 NARRATIVE DESCRIPTION

01 ☐ C CONTAMINATION OF AIR 02 ☐ OBSERVED DATE ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED 04 NARRATIVE DESCRIPTION

01 ☐ D FIRE/EXPLOSIVE CONDITIONS 02 ☐ OBSERVED DATE ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED 04 NARRATIVE DESCRIPTION

01 ☐ E DIRECT CONTACT 02 ☐ OBSERVED DATE ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED 04 NARRATIVE DESCRIPTION

01 ☒ F CONTAMINATION OF SOIL 02 ☒ OBSERVED DATE 1/8/87 ☐ POTENTIAL ☒ ALLEGED
03 AREA POTENTIALLY AFFECTED 1510 04 NARRATIVE DESCRIPTION

Soil samples taken on 1/8/87 from on site soil borings showed contamination levels of composite samples 2000 ug/kg TCE and 1700 ug/kg 1,2-DCE in composite samples.

01 ☐ G DRINKING WATER CONTAMINATION 02 ☐ OBSERVED DATE ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED 04 NARRATIVE DESCRIPTION

01 ☐ H WORKER EXPOSURE/INJURY 02 ☐ OBSERVED DATE ☐ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 04 NARRATIVE DESCRIPTION

01 ☐ I POPULATION EXPOSURE/INJURY 02 ☐ OBSERVED DATE ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED 04 NARRATIVE DESCRIPTION

848



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
XXXX 828074

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ J DAMAGE TO FLORA
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED

01 ☐ K DAMAGE TO FAUNA
04 NARRATIVE DESCRIPTION (include name(s) of species)

02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED

01 ☐ L CONTAMINATION OF FOOD CHAIN
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED

01 ☐ M UNSTABLE CONTAINMENT OF WASTES
(State number & amount of releases and/or spills)
03 POPULATION POTENTIALLY AFFECTED: _____

02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ N DAMAGE TO OFFSITE PROPERTY
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED

01 ☐ O CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED

01 ☐ P ILLEGAL UNAUTHORIZED DUMPING
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL OR ALLEGED HAZARDS

Leaking underground waste TCE tank was removed in 4/87 along with a waste oil and product oil tanks. Approximately 100 cubic yards of contaminated soils was removed for disposal as hazardous waste.

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

The obvious sources (tanks and highly contaminated soils) have been removed. An investigation to determine remedial alternatives is necessary.

V. SOURCES OF INFORMATION (See instructions, 0.0. State and sample number 100000)

Erdle Perforating Company, Inc. "Underground Tank and Soil Excavation" Dated July 1987.

Reference 8

DRAFT

DEC 09 1992

STATE OF NEW YORK: DEPARTMENT OF ENVIRONMENTAL CONSERVATION

In the Matter of the
Development and Implementation
of a Remedial Investigation/Feasibility
Study for an Inactive Hazardous Waste
Disposal Site, Under Article 27, Title 13, ORDER
and Article 71, Title 27 of the ON
Environmental Conservation Law CONSENT
of the State of New York by
by

INDEX #B8-0185-87-05

ERDLE PERFORATING COMPANY
Respondent.

Site Code #828072

WHEREAS,

1. The New York State Department of Environmental Conservation (the "Department") is responsible for enforcement of Article 27, Title 13 of the Environmental Conservation Law of the State of New York ("ECL"), entitled "Inactive Hazardous Waste Disposal Sites." This Order is entered into pursuant to the Department's authority under ECL Article 27, Title 13 and ECL Section 3-0301.

2. Erdle Perforating Company ("Respondent"), a corporation organized and existing under the laws of the State of New York, owns a facility located at 100 Pixley Industrial Parkway in the Town of Gates, Monroe County, known as the "Erdle Perforating Site." At one time Respondent had utilized an underground storage tank, which has been removed. During the course of removal of the storage tank it was confirmed that the tank had leaked and/or spills had occurred which has resulted in contamination of soils and groundwater on the Site.

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3. The Site is an inactive hazardous waste disposal site, as that term is defined at ECL Section 27-1301.2, and presents a significant threat to the public health or environment. The Site has been listed in the Registry of Inactive Hazardous Waste Disposal Sites in New York State as Site Number 8-28-072. The Department has classified the Site as a Classification "2" pursuant to ECL Section 27-1305.4.b.

4. A. Pursuant to ECL Section 27-1313.3.a, whenever the Commissioner of Environmental Conservation (the "Commissioner") "finds that hazardous wastes at an inactive hazardous waste disposal site constitute a significant threat to the environment, he may order the owner of such site and/or any person responsible for the disposal of hazardous wastes at such site (i) to develop an inactive hazardous waste disposal site remedial program, subject to the approval of the Department, at such site, and (ii) to implement such program within reasonable time limits specified in the order."

B. Any person under order pursuant to ECL Section 27-1313.3.a has a duty imposed by ECL Article 27, Title 13 to carry out the remedial program committed to under order. ECL Section 71-2705 provides that any person who fails to perform any duty imposed by ECL Article 27, Title 13 shall be liable for civil, administrative and/or criminal sanctions.

C. The Department also has the power, inter alia, to provide for the prevention and abatement of all water, land, and air pollution. ECL Section 3-0301.1.i.

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5. The Department and Respondent agree that the goals of this Order are for Respondent to (i) develop and implement a Remedial Investigation/Feasibility Study ("RI/FS") for the Site; and (ii) reimburse the Department's administrative costs.

6. Respondent, having waived Respondent's right to a hearing herein as provided by law, and having consented to the issuance and entry of this Order, agrees to be bound by its terms. Respondent consents to and agrees not to contest the authority or jurisdiction of the Department to issue or enforce this Order, and agrees not to contest the validity of this Order or its terms.

NOW, having considered this matter and being duly advised, IT IS ORDERED THAT:

I. Within 30 days after the effective date of this Order, Respondent shall submit to the Department all data within Respondent's possession or control regarding environmental conditions on-Site and off-Site, and other information described below, unless the Department advises the Respondent that such data have previously been provided to the Department. The data and other information shall include:

A. A brief history and description of the Site, including the types, quantities, physical state, location, and dates of disposal of hazardous waste including methods of disposal and spillage of such wastes;

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B. A concise summary of information held by Respondent and Respondent's attorneys and consultants with respect to all persons responsible for such disposal of hazardous wastes, including but not limited to names, addresses, dates of disposal and any proof linking each such person responsible with hazardous wastes identified pursuant to subparagraph I.A; and

C. A comprehensive list and copies of all existing relevant reports with titles, authors, and subject matter, as well as a description of the results of all previous investigations of the Site and areas in the vicinity of the Site, including copies of all available topographic and property surveys, engineering studies and aerial photographs.

II. RI/FS Work Plan Contents and Submittals

A. Within 45 days after the effective date of this Order, Respondent shall have submitted to the Department a detailed work plan describing the methods and procedures to be implemented in performing an RI/FS for the Site ("RI/FS Work Plan").

B. (1) The RI/FS Work Plan shall include, but not be limited to, the following:

a. A chronological description of the anticipated RI/FS activities together with a schedule for the performance of these activities.

b. A Sampling and Analysis Plan that shall include:

(i) A quality assurance project plan that

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describes the quality assurance and quality control protocols necessary to achieve the initial data quality objectives. This plan shall designate a data validation expert and must describe such individual's qualifications and experience.

(ii) A field sampling plan that defines sampling and data gathering methods in a manner consistent with the "Compendium of Superfund Field Operations Method" (EPA/540/P-87/001, OSWER Directive 9355.0-14, December 1987) as supplemented by the Department.

c. A health and safety plan to protect persons at and in the vicinity of the Site during the performance of the RI/FS which shall be prepared in accordance with 29 C.F.R. 1910 and all other applicable standards by a certified health and safety professional. Respondent shall add supplemental items to this plan necessary to ensure the health and safety of all persons at or in the vicinity of the Site during the performance of any work pursuant to this Order.

d. A citizen participation plan that is, at a minimum, consistent with the Department's publication, "New York State Inactive Hazardous Waste Site Citizen Participation Plan," dated August 30, 1988, and any subsequent revisions thereto.

(2) The RI/FS Work Plan shall incorporate all elements of a RI/FS as set forth in the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 ("CERCLA") (42 U.S.C. 9601 et seq.), as amended, the National Contingency Plan ("NCP") of March 8, 1990 (40 CFR Part 300), the

DRAFT

USEPA guidance document entitled "Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA," dated October 1988, and any subsequent revisions to that guidance document in effect at the time the RI/FS Work Plan is submitted, and appropriate USEPA and Department technical and administrative guidance documents.

III. Performance and Reporting of Remedial Investigation

A. Within 30 days after the Department's approval of the RI/FS Work Plan, Respondent shall commence the Remedial Investigation.

B. Respondent shall perform the Remedial Investigation in accordance with the Department-approved RI/FS Work Plan.

C. During the performance of the Remedial Investigation, Respondent shall have on-Site a full-time representative who is qualified to supervise the work done.

D. Within the time frame set forth in the RI/FS Work Plan, Respondent shall prepare a Remedial Investigation Report that shall:

(1) include all data generated and all other information obtained during the Remedial Investigation:

(2) provide all of the assessments and evaluations set forth in CERCLA, the NCP, and the guidance documents identified in Subparagraph II.B(2);

(3) identify any additional data that must be collected; and

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(4) include a certification by the individual or firm with primary responsibility for the day to day performance of the Remedial Investigation that all activities that comprised the Remedial Investigation were performed in full accordance with the Department-approved RI/FS Work Plan.

IV. Feasibility Study

A. Within 45 days after receipt of the Department's approval of the Remedial Investigation Report, Respondent shall prepare, and submit a Feasibility Study evaluating on-Site and off-Site remedial actions to eliminate, to the maximum extent practicable, all health and environmental hazards and potential hazards attributable to hazardous waste disposal at the Site. The Feasibility Study shall be prepared by and have the signature and seal of a professional engineer who shall certify that the Feasibility Study was prepared in accordance with this Order.

B. Respondent shall conduct and prepare the Feasibility Study in accordance with the Department-approved RI/FS Work Plan and in a manner consistent with CERCLA, the NCP, and the guidance documents identified in Subparagraph II.B(2).

C. Within 90 days after the Department's approval of the Feasibility Study, Respondent shall cooperate and assist the Department in soliciting public comment on the RI/FS and the proposed remedial action plan identified therein, in accordance with CERCLA, the NCP, the guidance documents identified in Subparagraph II.B(2), and with any Department policy and

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guidance documents in effect at the time the public comment period is initiated. After the close of the public comment period, the Department shall select a final remedial alternative for the site in a Record of Decision ("ROD"). The ROD shall be incorporated into and become an enforceable part of this Order.

V. Interim Remedial Measures

Before the effective date of the ROD, Respondent may propose interim remedial measures ("IRMs") for the Site on an as-needed basis. In proposing each IRM, Respondent shall submit to the Department a work plan which includes a chronological description of the anticipated IRM activities together with a schedule for the performance of those activities. Upon the Department's determination that the proposal is an appropriate interim remedial measure and upon the Department's approval of such work plan, the work plan shall be incorporated into and become an enforceable part of this Order; and Respondent shall submit to the Department for its review and (as appropriate) approval, in accordance with the schedule contained in the Department-approved work plan, detailed documents and specifications prepared, signed, and sealed by a professional engineer to implement the Department-approved IRM. Such documents shall include a health and safety plan, contingency plan, and (if the Department requires such) a citizen participation plan that incorporates appropriate activities outlined in the Department's publication, "New York State Inactive Hazardous Waste Citizen Participation Plan," dated

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August 30, 1988, and any subsequent revisions thereto.

Respondent shall then carry out such IRM in accordance with the requirements of the approved work plan, detailed documents and specifications, and this Order. Within the schedule contained in the Department-approved work plan, Respondent shall submit to the Department a final engineering report prepared by a professional engineer that includes a certification by that individual that all activities that comprised the IRM were performed in full accordance with the Department-approved work plan, detailed documents and specifications, and this Order. Within the schedule contained in the Department-approved work plan, Respondent shall submit to the Department a report or reports documenting the performance of the IRM. Respondent shall notify the Department of any significant difficulties that may be encountered in implementing the Department-approved work plan, detailed documents, or specifications and shall not modify any obligation unless first approved by the Department.

VI. Progress Reports

Respondent shall submit to the parties set forth in paragraph XIV a copy of written monthly progress reports that:

- (i) describe the actions which have been taken toward achieving compliance with this Order during the previous month; (ii)

include all results of sampling and tests and all other data received or generated by Respondent or Respondent's contractors or agents in the previous month, including quality assurance/quality control information, whether conducted

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pursuant to this Order or conducted independently by Respondent; (iii) identify all work plans, reports, and other deliverables required by this Order that were completed and submitted during the previous month; (iv) describe all actions, including, but not limited to, data collection and implementation of work plans, that are scheduled for the next month and provide other information relating to the progress at the Site; (v) include information regarding percentage of completion, unresolved delays encountered or anticipated that may affect the future schedule for implementation of the Respondent's obligations under the Order, and efforts made to mitigate those delays or anticipated delays; (vi) include any modifications to any work plans that Respondent has proposed to the Department or that the Department has approved; and (vii) describe all activities undertaken in support of the Citizen Participation Plan during the previous month and those to be undertaken in the next month. Respondent shall submit these progress reports to the Department by the tenth day of every month following the effective date of this Order.

VII. Review of Submittals

A. (1) The Department shall review each of the submittals Respondent makes pursuant to this Order to determine whether it was prepared, and whether the work done to generate the data and other information in the submittal was done, in accordance with this Order and generally accepted technical and scientific principles. The Department shall notify Respondent

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in writing of its approval or disapproval of the submittal, except for the submittal discussed in Paragraph II.B.(1)c. All Department-approved submittals shall be incorporated into and become an enforceable part of this Order.

(2) (a) If the Department disapproves a submittal, it shall so notify Respondent in writing and shall specify the reasons for its disapproval. Within 30 days after receiving written notice that Respondent's submittal has been disapproved, Respondent shall make a revised submittal to the Department that addresses and resolves all of the Department's stated reasons for disapproving the first submittal.

(b) After receipt of the revised submittal, the Department shall notify Respondent in writing of its approval or disapproval. If the Department disapproves the revised submittal, Respondent shall be in violation of this Order and the Department may take any action or pursue whatever rights it has pursuant to any provision of statutory or common law. If the Department approves the revised submittal, it shall be incorporated into and become an enforceable part of this Order.

B. The Department may require Respondent to modify and/or amplify and expand a submittal if the Department determines, as a result of reviewing data generated by an activity required under this Order or as a result of reviewing any other data or facts, that further work is necessary.

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VIII. Penalties

A. (1) Respondent's failure to comply with any term of this Order constitutes a violation of this Order and the ECL.

(2) Respondent shall be liable for payment to the Department of the sums set forth below as stipulated penalties for each day or part thereof that the Respondent is in violation of the terms of this Order. All penalties begin to accrue on the first day Respondent is in violation of the terms of this Order and continue to accrue through the final day of correction of any violation. Such sums shall be due and payable within 15 days after receipt of notification from the Department assessing the penalties. If such payment is not received within 15 days after Respondent receives such notification from the Department, interest shall be payable at the annual rate of nine per centum on the overdue amount from the day on which it was due through, and including, date of payment. Penalties shall be paid by certified check or money order, made payable to "New York State Department of Environmental Conservation" and shall be delivered personally or by certified mail, return receipt requested, to the Director, Division of Environmental Enforcement, N.Y.S.D.E.C., 50 Wolf Road, Albany, New York 12233-5500. Payment of the penalties shall not in any way alter Respondent's obligation to complete performance under the terms of this Order. Stipulated penalties shall be due and payable under this paragraph pursuant to the following schedule:

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<u>Period of Non-Compliance</u>	<u>Penalty Per Day</u>
First through 15th day	\$2,500
16th through 30th day	\$5,000
31st day and thereafter	\$15,000

B. Respondent shall not suffer any penalty under this Order or be subject to any proceeding or action if it cannot comply with any requirement hereof because of war, riot, or an unforeseeable disaster arising exclusively from natural causes which the exercise of ordinary human prudence could not have prevented. Respondent shall, within five days of when it obtains knowledge of any such condition, notify the Department in writing. Respondent shall include in such notice the measures taken and to be taken by Respondent to prevent or minimize any delays and shall request an appropriate extension or modification of this Order. Failure to give such notice within such five-day period constitutes a waiver of any claim that a delay is not subject to penalties. Respondent shall have the burden of proving that an event is a defense to compliance with this Order pursuant to this subparagraph.

IX. Entry Upon Site

Respondent hereby consents to the entry upon the Site or areas in the vicinity of the Site which may be under the control of the Respondent by any duly designated employee, consultant, contractor, or agent of the Department or any State agency for purposes of inspection, sampling, and testing and to ensure Respondent's compliance with this Order.

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X. Payment of Department Costs

Within 60 days after receipt of an itemized invoice from the Department, Respondent shall pay to the Department a sum of money which shall represent reimbursement for the Department's expenses including, but not limited to, direct labor, overhead, travel, analytical costs, and contractor costs incurred by the State of New York for work performed at the Site to date, as well as for negotiating this Order, reviewing and revising submittals made pursuant to this Order, overseeing activities conducted pursuant to this Order, and collecting and analyzing samples. Such payment shall be made by certified check payable to the Department of Environmental Conservation. Payment shall be sent to the Bureau of Program Management, Division of Hazardous Waste Remediation, N.Y.S.D.E.C., 50 Wolf Road, Albany, NY 12233-7010. Itemization of the costs shall include an accounting of personal services indicating the employee name, title, biweekly salary, and time spent (in hours) on the project during the billing period. The Department's approved fringe benefit and indirect cost rates shall be applied. Non-personal service costs shall be summarized by category of expense (e.g., supplies, materials, travel, contractual).

XI. Department Reservation of Rights

A. Nothing contained in this Order shall be construed as barring, diminishing, adjudicating, or in any way affecting any of the Department's rights including, but not limited to nor

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exemplified by, the following:

1. the Department's right to bring any action or proceeding against anyone other than Respondent and/or any of Respondent's directors, officers, employees, servants, agents, successors, and assigns;
2. the Department's right to enforce this Order against Respondent and/or any of Respondent's directors, officers, employees, servants, agents, successors, and assigns if Respondent fails to satisfy any of the terms of this Order;
3. the Department's right to bring any action or proceeding against Respondent and/or any of Respondent's directors, officers, employees, servants, agents, successors, and assigns with respect to claims for natural resources damages as a result of the release or threatened release of hazardous substances or constituents at or from the Site or areas in the vicinity of the Site;
4. the Department's right to bring any action or proceeding against Respondent and/or any of Respondent's directors, officers, employees, servants, agents, successors, and assigns with respect to hazardous substances that are present at the Site or that have migrated from the Site;
5. the Department's right to bring any criminal action against the Respondent and/or any of Respondent's directors, officers, employees, servants, agents, successors, and assigns;
6. the Department's right to require Respondent

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and/or any of Respondent's directors, officers, employees, servants, agents, successors, and assigns to develop and implement IRMs for the Site; and

7. the Department's right to gather information and enter and inspect property and premises.

B. Nothing contained in this Order shall be construed to prohibit the Commissioner or his duly authorized representative from exercising any summary abatement powers.

XII. Indemnification

Respondent shall indemnify and hold the Department, the State of New York, and their representatives and employees harmless for all claims, suits, actions, damages, and costs of every name and description arising out of or resulting from the fulfillment or attempted fulfillment of this Order by Respondent, and/or Respondent's directors, officers, employees, servants, agents, successors, and assigns.

XIII. Public Notice

A. Within 30 days after the effective date of this Order, Respondent shall file a Declaration of Covenants and Restrictions with the Monroe County Clerk to give all parties who may acquire any interest in the Site notice of this Order.

B. If Respondent proposes to convey the whole or any part of Respondent's ownership interest in the Site, Respondent shall, not fewer than 60 days before the date of conveyance, notify the Department in writing of the identity of the transferee and of the nature and proposed date of the

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conveyance and shall notify the transferee in writing, with a copy to the Department, of the applicability of this Order.

XIV. Communications

A. All written communications required by this Order shall be transmitted by United States Postal Service, by private courier service, or hand delivered as follows:

Communication from Respondent shall be sent to:

1. Edward Belmore, P.E.
Division of Hazardous Waste Remediation
New York State Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-7010
2. Director, Bureau of Environmental Exposure Investigation
New York State Department of Health
2 University Place
Albany, New York 12203
3. Mahmoud Khalil, P.E.
New York State Department of Environmental Conservation
6274 E. Avon-Lima Road
Avon, New York 14414
4. Glen Bailey, Esq.
Division of Environmental Enforcement
New York State Department of Environmental Conservation
270 Michigan Avenue
Buffalo, New York 14203-2999

B. Copies of work plans and reports shall be submitted as follows:

1. Four copies (one unbound) to Mahmoud Khalil
2. Two copies to the Director, Bureau of Environmental Exposure Investigation.
3. One copy to Glen Bailey, Esq.

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C. Communication to be made from the Department to the Respondent shall be sent to:

Michael Rick
Erdle Perforating Company
100 Pixley Industrial Parkway
Rochester, New York 14603-1568

Donald W. O'Brien, Jr., Esq.
Woods, Oviatt, Gilman, Sturman
& Clarke
44 Exchange Street
Rochester, New York 14614

D. The Department and Respondent reserve the right to designate additional or different addressees for communication on written notice to the other.

XV. Miscellaneous

A. All activities and submittals required by this Order shall address both on-Site and off-Site contamination resulting from the disposal of hazardous waste at the Site.

B. Respondent shall retain professional consultants, contractors, laboratories, quality assurance/quality control personnel and data validators acceptable to the Department to perform the technical, engineering and analytical obligations required by this Order. The experience, capabilities and qualifications of the firms or individuals selected by Respondent shall be submitted to the Department within 20 days after the effective date of this Order. The Department's approval of these firms or individuals shall be obtained prior to initiation of any activities for which the Respondent and such firms or individuals will be responsible.

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C. The Department shall have the right to obtain split samples, duplicate samples, or both, of all substances and materials sampled by Respondent, and the Department also shall have the right to take its own samples. Respondent shall make available to the Department the results of all sampling and/or tests or other data generated by Respondent with respect to implementation of this Order and shall submit these results in the progress reports required by this Order.

D. Respondent shall notify the Department at least 10 working days in advance of any field activities to be conducted pursuant to this Order.

E. Respondent shall obtain whatever permits, easements, rights-of-way, rights-of-entry, approvals, or authorizations are necessary to perform Respondent's obligations under this Order.

F. Respondent and Respondent's officers, directors, agents, servants, employees, successors, and assigns shall be bound by this Order. Any change in ownership or corporate status of Respondent including, but not limited to, any transfer of assets or real or personal property shall in no way alter Respondent's responsibilities under this Order.

G. Respondent shall provide a copy of this Order to each contractor hired to perform work required by this Order and to each person representing Respondent with respect to the Site and shall condition all contracts entered into hereunder upon

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performance in conformity with the terms of this Order.

Respondent or Respondent's contractors shall provide written notice of this Order to all subcontractors hired to perform any portion of the work required by this Order. Respondent shall nonetheless be responsible for ensuring that Respondent's contractors and subcontractors perform the work to be done under this Order in accordance with this Order.

H. All references to "professional engineer" in this Order are to an individual registered as a professional engineer in accordance with Article 145 of the New York State Education Law.

I. All references to "days" in this Order are to calendar days unless otherwise specified.

J. The section headings set forth in this Order are included for convenience of reference only and shall be disregarded in the construction and interpretation of any of the provisions of this Order.

K. (1) The terms of this Order shall constitute the complete and entire Order between Respondent and the Department concerning the Site. No term, condition, understanding, or agreement purporting to modify or vary any term of this Order shall be binding unless made in writing and subscribed by the party to be bound. No informal advice, guidance, suggestion, or comment by the Department regarding any report, proposal, plan, specification, schedule, or any other submittal shall be construed as relieving Respondent of Respondent's obligation to

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obtain such formal approvals as may be required by this Order.

(2) If Respondent desires that any provision of this Order be changed, Respondent shall make timely written application, signed by the Respondent, to the Commissioner setting forth reasonable grounds for the relief sought. Copies of such written application shall be delivered or mailed to:

Glen Bailey, Esq. and Mahmoud Khalil, P.E.

L. The effective date of this Order shall be the date it is signed by the Commissioner or his designee.

DATED: , New York
, 1993

THOMAS C. JORLING
Commissioner
New York State Department
of Environmental Conservation

DRAFT

CONSENT BY RESPONDENT

Respondent hereby consents to the issuing and entering of this Order, waives Respondent's right to a hearing herein as provided by law, and agrees to be bound by this Order.

ERDLE PERFORATING COMPANY

By: _____

Michael Rick
(TYPE NAME OF SIGNER)

Title: Vice President - Engineering

Date: _____

STATE OF NEW YORK)
) s.s.:
COUNTY OF Monroe)

On this _____ day of _____, 19____,
before me personally came _____, to
me known, who being duly sworn, did depose and say that he
resides in _____;
that he is the _____ of the
_____ corporation described in and
which executed the foregoing instrument; that he knew the seal
of said corporation that the seal affixed to said instrument was
such seal; that it was so affixed by the order of the Board of
Directors of said corporation and that he signed his name
thereto by like order.

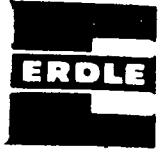
Notary Public

Reference 9

ERDLE PERFORATING COMPANY

100 Pixley Industrial Parkway
P.O. Box 1568 • Rochester, N.Y. 14603-1568
Phone 716/247-4700 • Fax 716/247-4716

1 of 1



May 7, 1993

Sheladia Associates, Inc.
15825 Shady Grove Road
Rockville, MD 20850

Mrs. Valerie Morra

Dear Mrs. Morra:

RE: Erdle Site Inspection

We had a call from your office on April 15, 1993 advising us that your reporting date to EPA had been extended. This letter summarizes recent activity at this site.

As you know, the engineering firm of O'Brien & Gere were retained to develop data to characterize this site and prepare a petition to reclassify it as a Class 3 site. They defaulted on this contract and our lawyers, Woods, Oviatt, Gilman, Sturman & Clarke are negotiating with them to obtain usable data that was collected.

A different engineering firm, Radian Corporation, has been retained. On May 3, 1993, we met with NYS D.E.C. personnel to establish technical goals and determine how we should proceed with a work plan. This will be submitted to NYS D.E.C. in about 30 days.

A review of the tank removal showed that over 146 tons of debris was disposed of in April of 1987 (not 135 tons as previously reported).

Since our degreasing system was shut down last year, a NYS SPDES permit was no longer required and has been discontinued. So both the source and potential sources have all been removed.

Sincerely,

ERDLE PERFORATING COMPANY

A handwritten signature in cursive script that reads "Michael Rick".
Michael Rick
VP-Engineering

Reference 10

CONCRETE
ASPHALT
SOILS
WATER
WASTES

FACT
TECHNICAL SERVICE, INC.

291 WEIDNER ROAD
ROCHESTER, NEW YORK 14624
716-328-3270

196
INSPECTION
ANALYSIS
DESIGN
TESTING
RESEARCH

Client: Erdle Perforating Co.
100 Pixley Industrial Pkwy.
P.O. Box 1568
Rochester, New York

Project: Proposed Addition
Pixley Road

Summary:

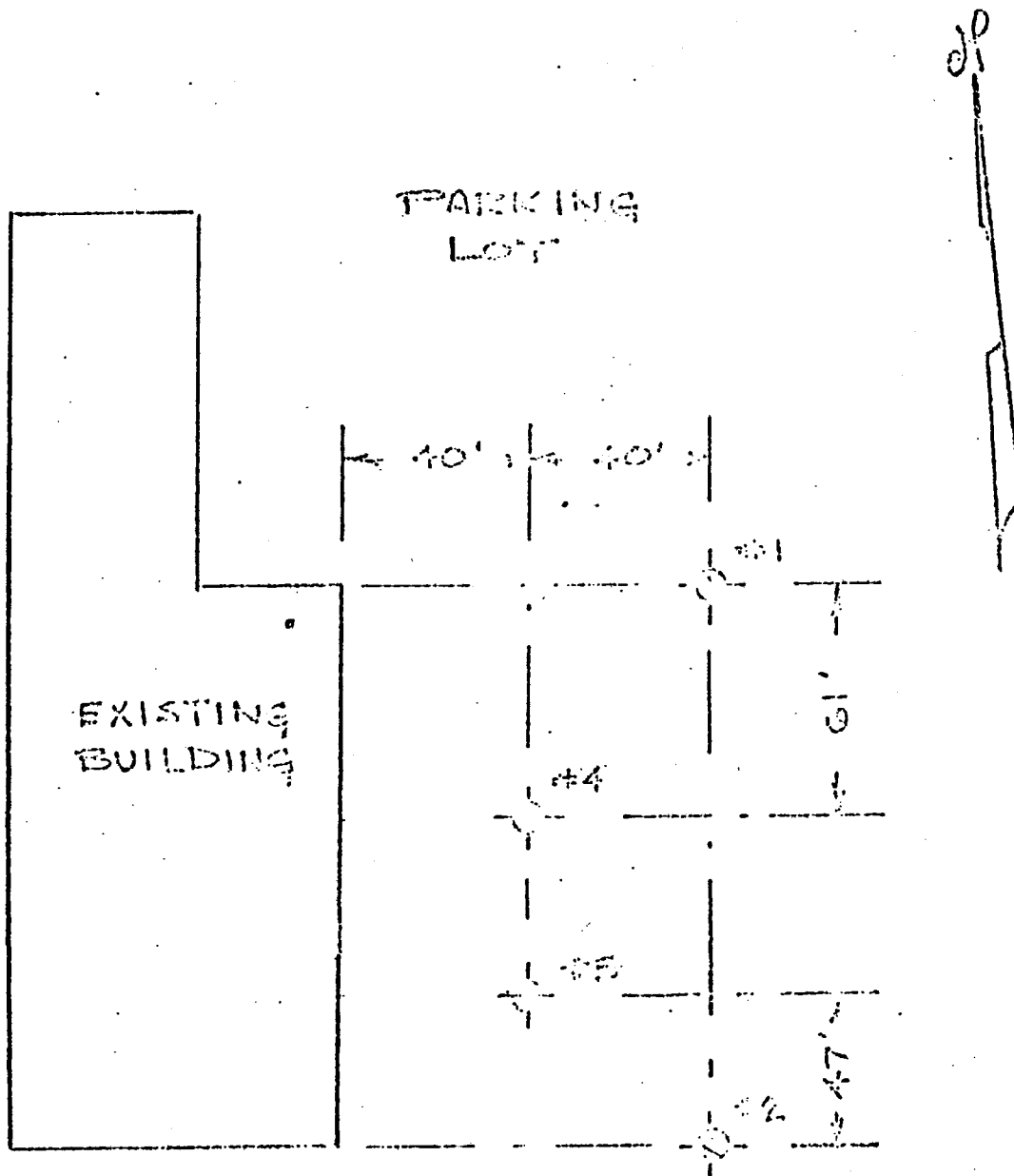
1. General
The site investigated consists of parking & lawn areas adjacent to existing building.
2. Classification
Visual as reported on enclosures.
3. Water Table
Measured at completion of borings.
4. Procedure
Four (4) borings were made at locations indicated on the sketch at the direction of the client. Standard boring procedures were employed utilizing two and one half inch casing and dry samples obtained with a split spoon unless otherwise indicated.

PAVEMENTS
CONCRETE
SOILS

TECHNICAL SERVICE, INC.
56 WINDSOR STREET
ROCHESTER, NEW YORK 14605
716-454-8030
SOIL BORING LOCATIONS

2 of 6

PROJECT
TESTING
DESIGN



JOB 9-54
NO SCALE
11-6-69

CONCRETE
ASPHALT
SOILS
WATER
WASTES

FACT TECHNICAL SERVICE, INC.

291 WEDDINER ROAD
ROCHESTER, NEW YORK 14624
716-328-3270

3 of 6

ANALYSIS
DESIGN
TESTING
RESEARCH

Sheet 3 of 6
Gr. W. Depth 8'3"
Surface Elev. _____

BORING LOG

Hole No. 1
Start 10/29/69
Finish 10/29/69

CLIENT Erdle Perforating Co., 100 Pixley Industrial Pkwy. P.O. Box 1568
Rochester, N.Y. 9-54
PROJECT Proposed Addition, Pixley Road

DEPTH FEET BLOW SURFACE	C	BLOWS ON SAMPLER		SAMPLE NO.	CLASSIFICATION & REMARKS
		0-6"	6"-18" N		
5	7	2	11	1	FILL (Sand, Silt, topsoil)
	9				Moist brown very compact SILT, some clay, trace fine sand.
	13				
	19				
	25				Moist brown medium CLAY, little silt.
10	21	22	61	2	
	32				
	36				
	37				
10	34	8	10	3	Bottom of hole 11'6"
15					
20					
25					
30					
35					

ASPHALT
SOILS
WATER
WASTES

**FACT
TECHNICAL SERVICE, INC.**
291 WEIDNER ROAD
ROCHESTER, NEW YORK 14624
716-328-3270

4 of 6

ANALYSIS
DESIGN
TESTING
RESEARCH

Sheet 4 of 6
Gr. W. Depth 6'6"
Surface Elev. _____

**BORING
LOG**

Hole No. 2
Start 10/30/69
Finish 10/30/69

CLIENT Erdle Perforating Co., 100 Pixley Industrial Pkwy., P.O. Box 1568,
Rochester, N.Y.
PROJECT Proposed Addition, Pixley Road 9-54

DEPTH FEET BELOW SURFACE	C	BLOWS ON SAMPLER		SAMPLE NO.	CLASSIFICATION & REMARKS
		0-6"	6"-18" N		
5	15	6	22	1	FILL (sand, silt, topsoil)
	31				
	35				
	39				
	37				
10	41	30	127/2	2	Boulders at 6'0" Moist grayish brown very compact fine SAND, some silt, little clay, little gravel.
	122				
	49				
	45				
	52				
15		100/6		3	Refusal at 10'6"
20					
25					
30					
35					

CONCRETE
ASPHALT
SOILS
WATER
WASTES

**ROACH
TECHNICAL SERVICE, INC.**
201 WEIDNER ROAD
ROCHESTER, NEW YORK 14624
716-328-3270

5 of 8

ANALYSIS
DESIGN
TESTING
RESEARCH

Sheet 5 of 6
Gr. W. Depth 4' 10"
Surface Elev. _____

**BORING
LOG**

Hole No. 3
Start 10/30/69
Finish 10/30/69

CLIENT Erdle Perforating Co., 100 Pixley Industrial Pkwy., P.O. Box 1568
Rochester, N.Y.
PROJECT Proposed Addition, Pixley Road 9-54

DEPTH BELOW SURFACE	C	BLOWS ON SAMPLER		SAMPLE NO.	CLASSIFICATION & REMARKS
		0-6"	6"-18" N		
5	15	2	7	1	Moist brown loose to compact SAND, trace to little silt.
	23				
	25				
	29				
	27				
10	31	16	44	2	Moist brown hard CLAY, some silt.
	36				
	41				
	43				
	50				
15		18	53	3	Bottom of hole 11'6"
20					
25					
30					
35					

ASPHALT
SOILS
WATER
WASTES

WACO
TECHNICAL SERVICE, INC.

291 WEIDNER ROAD
ROCHESTER, NEW YORK 14624
716-328-3270

ANALYSIS
DESIGN
TESTING
RESEARCH

Sheet 6 of 6
Gr. W. Depth 6'9"
Surface Elev.

BORING
LOG

Hole No. 4
Start 10/30/69
Finish 10/30/69

CLIENT Erdle Perforating Co., 100 Pixley Industrial Pkwy., P.O. Box 1568

PROJECT Proposed Addition, Pixley Road

9-54

DEPTH BELOW SURFACE	C	BLOWS ON SAMPLER		SAMPLE NO.	CLASSIFICATION & REMARKS
		0-6"	6"-18" N		
5	12	2	9	1	Moist brown loose to compact SAND, little to some silt
	21				
	23				
	22				
	34				
10	31	11	35	2	
	40				
	43				
	45				
	52				
15		23	57	3	Moist brown hard CLAY, some silt.
					Bottom of hole 11'6"
20					
25					
30					
35					

Reference 11

ERDLE PERFORATING COMPANY
ROCHESTER, NEW YORKPHONE 716-247-4700
FAX 716-247-4716TELECOPIER TRANSMITTAL SHEET

Send To: VALLERIE MORRA
Location: SHELADIA ASSOCIATES, INC.
From: MICHAEL RICK
Date: DEC. 29, 1992 Time: 3:55 PM
Total Number of pages including this page: 4

DEAR VALLERIE,

HERE ARE TWO MAPS AND A SITE PLAN THAT LOCATE THE FORMER SITE OF THE UNDERGROUND WASTE STORAGE TANKS. A 2000 GAL. SPENT SOLVENT TANK AND A 3000 GAL. WASTE OIL TANK WERE REMOVED APRIL 13 AND 14, 1987. MORE THAN 135 TONS OF MATERIAL WAS REMOVED AND DISPOSED OF WITH APPROPRIATE PERMITS. WE ARE CONSIDERING AIR SPARGING AND VACUUM EXTRACTION TO REMEDIATE ANY RESIDUAL TCE CONTAMINATION. CURRENTLY WE ARE IN THE PROCESS OF PREPARING A PETITION TO RECLASSIFY THE SITE FROM A CLASS 2 TO A CLASS 3, THEN VOLUNTARILY PROCEEDING. WE BELIEVE ANY RESIDUAL CONTAMINANTS DO NOT CONSTITUTE A SIGNIFICANT THREAT TO THE ENVIRONMENT BECAUSE OF THE LACK OF TRANSPORT MEANS, AVAILABLE RECEPTORS OR HAZARDOUS LEVELS OF EXPOSURE. WE JOINED EPA'S 33/50 PROGRAM, & SHUT DOWN THE DEGREASER. OURS IS AN INDUSTRIAL SITE, CONTAINED TO THE SOUTH BY A RAILROAD LINE AND TO THE WEST BY ROUTE 490. IN 1987, IT WAS DETERMINED THAT GROUNDWATER IS NOT USED AS A DRINKING WATER SUPPLY WITHIN A 3000 FT. RADIUS OF THE TANKS, AND THAT THE ONLY WELL ON RECORD IN GATES IS APPROXIMATELY 3 MILES WNW OF THE TANKS. THIS INFO SHOULD GET YOU STARTED. SINCERELY, Michael Rick

Reference 12

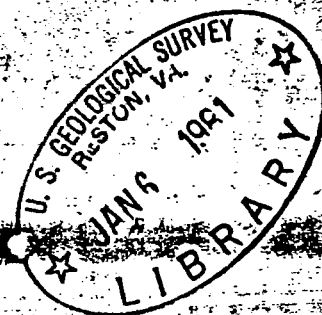
1974

R
(200)
Ga 2
New York
1974
pt. 1

1 of 2 X

Water Resources Data for New York

Part 1. Surface Water Records



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Prepared in cooperation with the State of New York
and with other agencies

04232000 GENESEE RIVER AT ROCHESTER, N.Y.

LOCATION.—Lat 43°10'50", long 77°37'40", Monroe County, on right bank 40 ft (12 m) downstream from plant 5 of Rochester Gas and Electric Corp., 100 ft (30 m) upstream from bridge on Driving Park Avenue in Rochester, and 6.1 mi (9.8 km) upstream from mouth.

DRAINAGE AREA.—2,457 mi² (6,364 km²).

PERIOD OF RECORD.—April 1904 to September 1918, December 1919 to current year. Published as "at Driving Park Avenue" 1919-68.

GAGE.—Water-stage recorder. Datum of gage is 246.24 ft (75.054 m) above mean sea level (247 ft or 75 m, Barge Canal datum). April 1904 to December 1910, nonrecording gage and December 1910 to September 1918, water-stage recorder at site 5 mi (8 km) upstream at datum. 506.85 ft (154.488 m), Barge Canal datum. December 1919 to Apr. 4, 1927, water-stage recorder in plant 5, and Apr. 4, 1927, to June 19, 1936, at present site at datum 250 ft (76 m), Barge Canal datum.

AVERAGE DISCHARGE.—67 years (1905-18, 1920-74), 2,716 ft³/s (76.92 m³/s) (15.01 in/yr (381.3 cm/yr)).

EXTREMES.—Current year: Maximum discharge, 15,300 ft³/s (433 m³/s) Apr. 2 (gage height, 11.66 ft (3.554 m)); minimum, 70 ft³/s (1.98 m³/s) Oct. 6 (gage height, 0.65 ft (0.198 m), result of regulation).

Period of record: Maximum discharge, 48,300 ft³/s (1,370 m³/s) Mar. 30, 1916 (gage height, 15.3 ft (4.66 m), site and datum then in use); maximum at present site, 34,400 ft³/s (974 m³/s) Mar. 19, 1942; maximum gage height, 17.08 ft (5.206 m) Apr. 2, 1940 (present datum); minimum discharge, less than 10 ft³/s (0.28 m³/s), occurred during low-water periods when powerplant was shut down; minimum daily, 91 ft³/s (2.58 m³/s) Jan. 9, 29, Feb. 1, 8, 1961.

Maximum discharge known, about 54,000 ft³/s (1,530 m³/s) Mar. 18, 1865.

REMARKS.—Records fair. Extensive diurnal fluctuation caused by powerplants upstream from station. New York State Erie (Barge) Canal crosses river 5.4 mi (8.7 km) upstream from station. Water diverted by the canal from Lake Erie is discharged into river from the west, the canal again diverting a smaller amount of water from river to the east. Additional regulation is provided by Rushford Lake and Mount Morris Lake. Water-quality records for the current year are published in Part 2 of this report.

REVISIONS.—WRD N.Y. 1967: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	740	2,330	2,610	5,020	5,300	4,240	12,000	1,980	2,390	2,370	792	725
2	640	2,710	1,950	4,270	4,660	4,680	13,100	2,530	2,080	2,120	780	694
3	625	2,980	1,850	4,100	4,190	4,780	13,680	2,380	2,060	2,490	729	1,550
4	568	2,640	1,670	4,010	4,040	5,860	12,200	1,480	1,770	2,080	1,760	1,320
5	1,090	2,520	1,340	3,660	3,570	8,040	10,400	2,000	1,670	1,880	1,430	1,490
6	347	2,400	2,100	3,510	3,440	8,910	9,910	1,410	1,440	1,430	1,320	1,230
7	551	2,200	2,330	3,660	3,130	9,330	9,660	1,030	1,280	1,740	1,210	1,250
8	717	1,780	1,920	2,930	3,000	8,830	9,570	2,510	1,520	1,470	926	976
9	683	1,380	2,220	2,530	2,700	7,920	9,730	2,000	1,480	1,180	824	1,120
10	578	1,210	2,410	2,340	2,410	7,780	9,840	2,720	1,540	1,210	736	1,200
11	662	1,520	2,980	2,020	2,450	7,640	10,500	3,080	1,390	1,180	595	874
12	586	1,510	3,180	1,910	2,350	8,940	10,700	3,590	1,420	1,100	759	1,140
13	671	1,480	2,800	1,800	2,530	9,550	9,770	4,860	1,290	1,070	764	865
14	602	1,560	2,550	1,560	2,580	8,830	8,630	6,780	1,120	1,070	705	1,040
15	530	2,160	2,460	1,910	2,650	7,960	9,110	7,920	1,620	1,110	605	1,070
16	633	2,150	2,360	1,990	2,220	5,830	8,910	7,450	1,390	1,030	619	1,080
17	559	2,500	1,820	1,990	2,390	4,560	9,010	7,640	1,290	870	864	712
18	652	2,760	1,430	2,350	2,420	3,650	8,790	4,960	1,330	1,010	642	990
19	612	2,620	1,930	2,040	2,290	3,050	7,910	5,840	2,180	976	1,040	597
20	510	2,260	1,680	2,470	2,360	3,160	6,370	5,690	2,920	857	591	803
21	547	1,590	1,750	3,270	2,150	3,390	4,990	5,980	3,470	739	702	963
22	716	1,410	3,170	4,630	4,130	3,330	4,230	5,190	4,690	714	673	496
23	755	1,330	4,670	6,540	9,320	3,150	3,330	3,180	2,860	841	523	464
24	924	1,410	3,840	6,990	8,160	3,380	3,840	2,520	2,290	764	479	1,210
25	829	1,810	3,130	6,540	6,270	3,950	3,800	2,790	2,340	748	566	1,370
26	897	2,570	3,530	5,630	5,200	3,400	3,810	2,490	1,690	874	494	1,390
27	1,070	3,320	6,150	5,260	4,470	3,340	3,580	2,440	1,610	848	503	1,170
28	869	3,420	8,280	5,170	4,230	3,310	2,930	1,980	1,480	679	493	1,210
29	834	3,390	7,940	5,870	-----	3,000	2,680	2,390	1,660	1,090	688	1,100
30	579	3,160	6,430	6,580	-----	2,530	2,360	2,370	2,100	1,090	614	1,080
31	1,460	-----	5,440	5,860	-----	7,330	-----	2,520	-----	987	771	-----
TOTAL	22,016	66,080	97,120	118,410	104,610	173,550	235,260	111,700	57,370	37,617	24,197	31,179
MEAN	710	2,203	3,133	3,820	3,376	5,598	7,842	3,603	1,912	1,213	781	1,039
MAX	1,460	3,420	8,280	6,990	9,320	9,550	13,600	7,920	4,690	2,490	1,760	1,550
MIN	347	1,210	1,340	1,560	2,150	2,530	2,360	1,030	1,120	679	479	464

CAL YR 1973 TOTAL 1,109,542 MEAN 3,040 MAX 17,400 MIN 347
WTR YR 1974 TOTAL 1,079,109 MEAN 2,956 MAX 13,600 MIN 347

Reference 13

1 of 3

USERS GUIDE NUMBER 2
(For use with NY Natural Heritage Program and Significant Habitat Unit Reports)

IDENTIAL STATEMENT: The information provided in these reports is for your in-house use only. It is of a sensitive nature and may not be released to the general public or be incorporated in any public document without prior written permission.

NATURAL HERITAGE REPORTS: Explanation of codes and column headings:

CO. - first 4 letters of the county name.

TOWN NAME - first 4 letters of the town name.

USGS 7 1/2' TOPOGRAPHIC MAP: name of US Geological Survey map (1:24,000 scale).

LAT. - latitude of the location of the element. Composed of degrees, minutes and seconds; for example, 42 degrees, 30 minutes and 33 seconds. The latitude & longitude coordinate gives the centroid of the occurrence only; the outer boundary of the occurrence is often much larger. Important: latitude/longitude must be used with Precision (see below). For example, the location of an occurrence with M (minute) Precision is not precisely known at this time and is thought to occur somewhere within a 1.5 mile radius of the given latitude/longitude.

LONG. - longitude of the location of the element. See LATITUDE above.

SIZE IN ACRES - approximate acres occupied by the element.

SCIENTIFIC NAME - scientific name of the rare plant or animal or the name of the community.

COMMON NAME - common name of the rare plant or animal.

TYPE (of element) - A or I=animal, C=community, I=invertebrate, P=vascular plant, N=non-vascular plant, O=other

PRECISION: the locational PRECISION of a mapped occurrence.

S - SECONDS. location known precisely - within a 3-second radius of the latitude & longitude given.

M - MINUTE. location within 1-minute radius (1.5 mi.) of the latitude & longitude given.

YEAR LAST OBS. - year the element was last observed at this site.

ELEMENT OCCURRENCE RANK - comparative evaluation summarizing the quality, condition, viability and defensibility of the element occurrence at this site.

A-D = Extant: A=Excellent, B=Good, C=Marginal, D=Poor, E=Extant but with insufficient data to assign a rank of A-D

F = Failed to find. Did not locate species, habitat still extant, further field work is justified.

H = Historical. Historical occurrence without any recent field information.

X = Extirpated. Field/other data indicates element/habitat destroyed so it can no longer exist at site.

NYS LEGAL STATUS - protected status of the plant, animal or community.

ANIMALS: categories of Endangered and Threatened species are defined in New York State Environmental Conservation Law section 11-0535. Endangered, Threatened, and Special Concern species are listed in regulation 6NYCRR 182.5.

E = Endangered Species: any species which meet one of the following criteria:

1) Any native species in imminent danger of extirpation or extinction in New York.

2) Any species listed as endangered by the United States Department of the Interior, as enumerated in the Code of Federal Regulations 50 CFR 17.11.

T = Threatened Species: any species which meet one of the following criteria:

1) Any native species likely to become an endangered species within the foreseeable future in New York or

2) Any species listed as threatened by the U.S. Department of the Interior, as enumerated in the Code of the Federal Regulations 50 CFR 17.11.

SC = Special Concern Species: those species which are not yet recognized as endangered or threatened, but for which documented concern exists for their continued welfare in New York. Unlike the first two categories, species of special concern receive no additional legal protection under Environmental Conservation Law section 11-0535 (Endangered and Threatened Species).

P = Protected Wildlife (defined in Environmental Conservation Law section 11-0103): wild game, protected wild birds, and endangered species of wildlife.

U = Unprotected (defined in Environmental Conservation Law section 11-0103): the species may be taken at any time without limit; however a licence to take may be required.

G = Game (defined in Environmental Conservation Law section 11-0103): any of a variety of big game or small game species as stated in the Environmental Conservation Law; many normally have an open season for at least part of the year, and are protected at other times.

PLANTS: The following categories are defined in regulation 6NYCRR part 193.3 (amendment pending) and apply to New York State Environmental Conservation Law section 9-1503.

E = Endangered Species: listed species are those with: 1) 5 or fewer extant sites, or 2) fewer than 1,000 individuals, or 3) restricted to fewer than 4 U.S.G.S. 7 1/2 minute topographical maps, or 4) species listed as endangered by the U.S. Department of the Interior, as enumerated in the Code of Federal Regulations 50 CFR 17.11.

T = Threatened: listed species are those with: 1) 6 to fewer than 20 extant sites, or 2) 1,000 to fewer than 3,000 individuals, or 3) restricted to not less than 4 or more than 7 U.S.G.S. 7 and 1/2 minute topographical maps, or 4) listed as threatened by the U.S. Department of the Interior, as enumerated in the Code of Federal Regulations 50 CFR 17.11.

R = Rare: listed species have: 1) 20 to 35 extant sites, or 2) 3,000 to 5,000 individuals statewide.

V = Exploitably vulnerable: listed species are likely to become threatened in the near future throughout all or a significant portion of their range within the state if causal factors continue unchecked. (The attached list does not contain a complete list of the species in this category.)

COMMUNITIES: At this time there are no categories defined for communities.

U = unprotected

FEDERAL STATUS - federal legal status of plants and animals as defined by the Endangered Species Act.

blank = no Federal Endangered Species Act status.

LE = taxon is formally listed as endangered.

LT = taxon is formally listed as threatened.

C1 = Candidate, category 1 - there is sufficient information to list the taxon as endangered or threatened.

C2 = Candidate, category 2 - taxon may be appropriate for listing, but more data are needed.

3A = Taxon is considered extinct by the US Fish and Wildlife Service.

3B = Taxon is no longer considered taxonomically distinct by the US Fish and Wildlife Service and thus not appropriate for listing.

3C = Taxon has been shown to be more abundant, widespread or better protected than previously thought and therefore is not in need of official listing.

* = Taxon is possibly extinct.

** = Taxon is thought to be extinct in the wild but extant in cultivation.

2/3

HERITAGE GLOBAL RANK: The Heritage Global Rank which reflects the rarity of the element throughout the world.

G1 - Critically imperiled globally because of extreme rarity (5 or fewer occurrences), or very few remaining acres, or miles of stream) or especially vulnerable to extinction because of some factor of its biology.

G2 - Imperiled globally because of rarity (6 - 20 occurrences, or few remaining acres, or miles of stream) or very vulnerable to extinction throughout its range because of other factors.

G3 - Either very rare and local throughout its range (21 to 100 occurrences), or found locally (even abundantly at some of its locations) in a restricted range (e.g. a physiographic region), or vulnerable to extinction throughout its range because of other factors.

G4 - Apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery.

G5 - Demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.

GN - Historically known, with the expectation that it might be rediscovered.

GX - Species believed to be extinct.

GU - Status unknown.

HERITAGE STATE RANK: The Heritage State Rank which reflects the rarity within New York State.

S1 - Typically 5 or fewer occurrences, very few remaining individuals, acres, or miles of stream, or some factor of its biology making it especially vulnerable in New York State.

S2 - Typically 6 to 20 occurrences, few remaining individuals, acres, or miles of stream, or factors demonstrably making it very vulnerable in New York State.

S3 - Typically 21 to 100 occurrences, limited acreage, or miles of stream in New York State.

S4 - Apparently secure in New York State.

S5 - Demonstrably secure in New York State.

SH - Historically known from New York State, but not seen in the past 15 years.

SX - Apparently extirpated from New York State.

SE - Exotic, not native to New York State.

SR - State report only, no verified specimens known from New York State.

SU - Status unknown.

TAXON RANK - The T-ranks are defined the same way the Global ranks are but the T-rank only refers to the rarity of the subspecific taxon of the species as a whole.

Q - Indicates a question exists whether or not the taxon is a good taxonomic entity.

? - Indicates a question exists about the rank.

SIGNIFICANT HABITAT UNIT REPORTS: Key to Symbols

SW - Significant for Wildlife

SP - Significant for Plants

SB - Significant for Wildlife and Plants

PW - Potentially Significant for Wildlife

PP - Potentially Significant for Plants

PB - Potentially Significant for Both Wildlife and Plants

DA - Deer Winter Concentration Area - Aerial Survey

DC - Deer Winter Concentration Area

OT - Other - (e.g. Unique Geological Feature)

NATURAL HERITAGE PROGRAM DATABASE REPORT (IR2.frm)
 RARE PLANTS, ANIMALS, AND NATURAL COMMUNITIES
 *****CONFIDENTIAL INFORMATION*****
 (refer to Users Guide for explanation)

CO.	TOWN NAME	USGS 7 1/2' TOPOGRAPHIC MAP	LAT.	LONG.	SIZE IN ACRES. (0 = UNKNOWN)	SCIENTIFIC NAME	COMMON NAME	A/I=anim		PRECISION S=second M=minute	YEAR LAST OBS.	EO RANK	NYS LEGAL STATUS	FED. STATUS	HERITAGE GLOBAL/STATE RANK	OFFICE USE	
								O=common P=plant O=other									
MONR	PITTSFORD	PITTSFORD	430633	773037	1	DESMODIUM GLABELLUM	TALL TICK-CLOVER	P		S	1985	B	T		G5	S1	4307715 2
MONR	CITY OF ROCHEST	ROCHESTER EAST	430748	773721	0	TROLLIUS LAXUS SSP LAXUS	SPREADING GLOBEFLOWER	P		M	1841	H	T	3C	G4T3Q	S3	4307725 11
MONR	CITY OF ROCHEST	ROCHESTER EAST	430914	773447	0	BUCHNERA AMERICANA	BLUE-HEARTS	P		M	1897	H	U		G4G5	SH	4307725 10
MONR	CITY OF ROCHEST	ROCHESTER WEST, ROCHESTER EAST	431226	773745	0	BUCHNERA AMERICANA	BLUE-HEARTS	P		M		H	U		G4G5	SH	4307726 1
MONR	CITY OF ROCHEST	ROCHESTER EAST	431428	773432	2	ASTER FIRMUS	CORNEL-LEAVED ASTER	P		S	1988	CD	U		G5Q	S1	4307725 5
MONR	CITY OF ROCHEST	ROCHESTER WEST, ROCHESTER EAST	431046	773743	0	PINGUICULA VULGARIS	BUTTERWORT	P		M	1841	H	R		G5	S2	4307726 2
MONR	RUSH	RUSH	425933	773834	0	CAREX FORMOSA	HANDSOME SEDGE	P		M	1920	H	R		G3	S1	4207786 2
MONR	RUSH	RUSH	425818	774158	0	CAREX FORMOSA	HANDSOME SEDGE	P		M	1920	H	R		G3	S1	4207786 1
MONR	RUSH	RUSH	425743	774026	10	OAK OPENINGS		C		S	1990	B	U		G2	S1	4207786

3
6
3

Reference 14

142
Erdle Perforating.
100 Pixley Industrial Pkwy
Gates
Monroe County, NY
NYD982531865

=====
Site Data
=====

Population: 86857.52
Households: 33452.42
Drilled Wells: 236.35
Dug Wells: 21.75
Other Water Sources: 11.44

=====
Partial (RING) data
=====

---- Within Ring: 4 Mile(s) and 3 Mile(s) ----

Population: 41261.26
Households: 16161.83
Drilled Wells: 107.58
Dug Wells: 14.04
Other Water Sources: 10.60

** Population On Private Wells: 310.50

---- Within Ring: 3 Mile(s) and 2 Mile(s) ----

Population: 24014.26
Households: 9304.77
Drilled Wells: 84.07
Dug Wells: 7.69
Other Water Sources: 0.84

** Population On Private Wells: 236.83

---- Within Ring: 2 Mile(s) and 1 Mile(s) ----

Population: 17393.58
Households: 6424.37
Drilled Wells: 37.63
Dug Wells: 0.02
Other Water Sources: 0.00

** Population On Private Wells: 101.91

---- Within Ring: 1 Mile(s) and .5 Mile(s) ----

Population: 3443.18
Households: 1273.55
Drilled Wells: 5.92
Dug Wells: 0.00
Other Water Sources: 0.00

** Population On Private Wells: 16.01

Erdle Perforating.
100 Pixley Industrial Pkwy
Gates
Monroe County, NY
NYD982531865

2 4 2

---- Within Ring: .5 Mile(s) and .25 Mile(s) ----

Population:	560.01
Households:	217.44
Drilled Wells:	0.82
Dug Wells:	0.00
Other Water Sources:	0.00

** Population On Private Wells: 2.11

---- Within Ring: .25 Mile(s) and 0 Mile(s) ----

Population:	185.22
Households:	70.46
Drilled Wells:	0.33
Dug Wells:	0.00
Other Water Sources:	0.00

** Population On Private Wells: 0.86

** Total Population On Private Wells: 668.23

Reference 15

MONROE COUNTY

LOCATION	SOURCE
703.	.Tonawanda Creek, Wells
040.	.Wells
760.	.Wells
805.	.Wells
100.	.Lake Leroy
.70.	.Wells
560.	.Wells
50.	.Wells
.56.	.Wells
.98.	.Wells
.24.	.Wells
.40.	.Wells
.60.	.Wells
.NA.	.Wells
.21.	.Wells
.40.	.Wells
.54.	.Wells
.15.	.Wells
.30.	.Wells
.NA.	.Wells
.20.	.Wells
.18.	.Wells
.52.	.Wells
.NA.	.Wells
.30.	.Wells

ID NO COMMUNITY WATER SYSTEM

Municipal Community

ID NO	COMMUNITY WATER SYSTEM	POPULATION	SOURCE
1	Brockport Village.	10000.	.Lake Ontario
2	Churchville Village.	1500.	.Wells
3	East Rochester Village.	8000.	.Wells
	Fairport Village (See No 4 Ontario Co, Page 12).	8800	
4	Hilton Village.	5000.	.Lake Ontario
5	Monroe County Water Authority.	150000.	.Lake Ontario
6	Park Road Extension.	10.	.Wells
7	Pittsford Village.	3500.	.Wells
	Rochester City (See No 11 Livingston Co, Page 10 and No 13 Ontario Co, Page 12).	225000	
8	Webster Village.	35000.	.Wells

Non-Municipal Community

9	John B. Martin & Sons Trailer Park.	250.	.Wells
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ORLEANS COUNTY

ID NO COMMUNITY WATER SYSTEM

Municipal Community

1	Albion Village.
2	Holley Village.
3	Lyndonville Village.

Non-Municipal Community

4	County Line Mobile Home Park.
5	Hovey's Trailer Court.
6	Maples Trailer Park.
7	Oak Orchard Mobile Homes.
8	Ridge Mobile Estates, Inc.

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Reference 17

1 of 1

RECORD OF TELEPHONE CONVERSATION

DATE 01/29/93 JOB NO.: 4547

RECORDED BY: Vineet Bhanot OWNER/CLIENT: PASI

TALKED WITH: Michael Rick OF Erdle Perforating

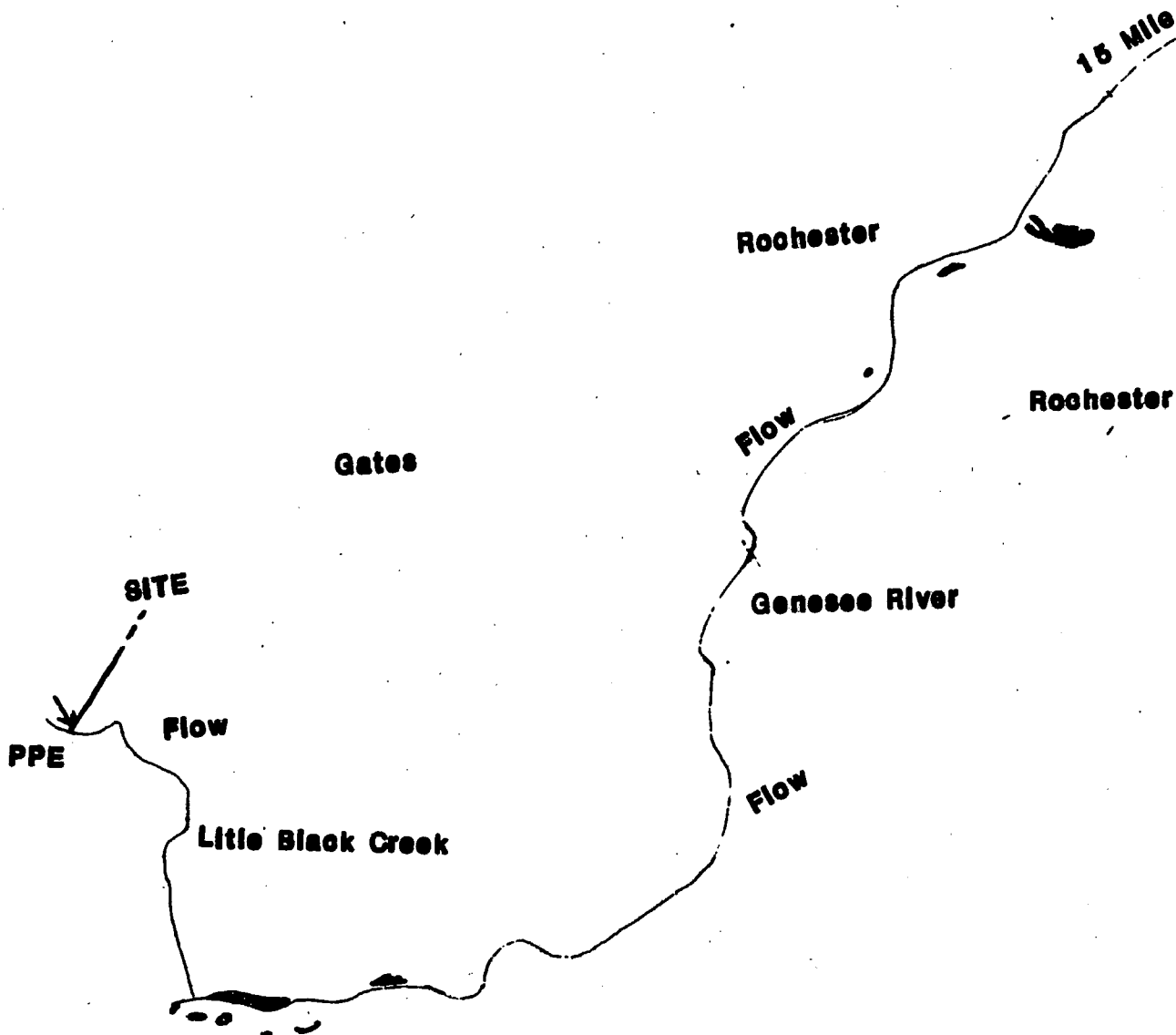
NATURE OF CALL: INCOMING ☐ OUTGOING ☐ PHONE NO: 716 247 4700

ROUTE TO: INFORMATION ACTION

MAIN SUBJECT OF CALL: Inquire about no of workers

ITEMS DISCUSSED: Approximately 72 workers

Reference 18



LEGEND:
■ Adjacent Wetlands

NOTE: Wetlands are located along the inwater segment of the 15 Mile surface water pathway

**15 MILE SURFACE WATER PATHWAY
ERDLE PERFORATING COMPANY
ROCHESTER, NEW YORK**

NOT TO SCALE

EBASCO ENVIRONMENTAL

FIGURE 3

Reference 16

